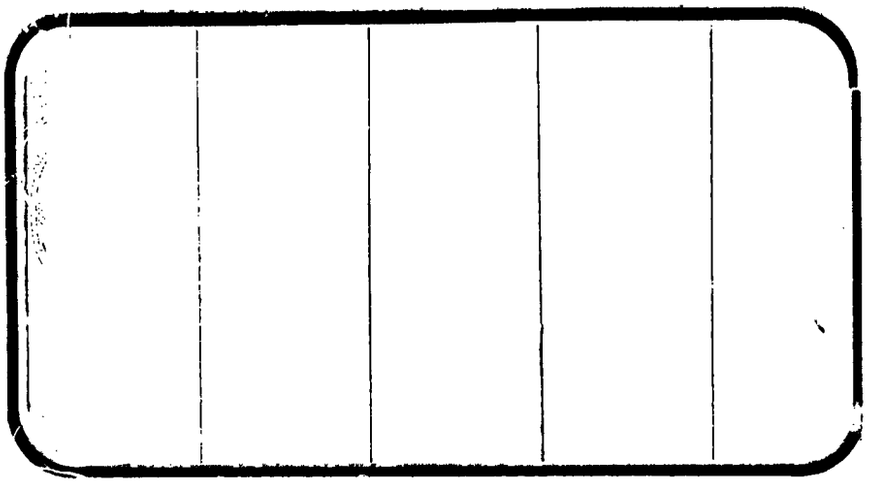
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



(NASA-CR-144601) RESULTS OF AN INVESTIGATION OF JET PLUME EFFECTS ON AN 0.010-SCALE MODEL (75-OTS) OF THE SPACE SHUTTLE INTEGRATED VEHICLE IN THE 9 X 7-FOOT LEG OF THE NASA/AMES UNITARY WIND TUNNEL G3/18

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER CORPORATION

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VOLUME 1 OF 2

RESULTS OF AN INVESTIGATION OF JET PLUME EFFECTS ON AN 0.010-SCALE MODEL (75-OTS) OF THE SPACE SHUTTLE INTEGRATED VEHICLE IN THE 9 X 7-FOOT LEG OF THE NASA/AMES UNITARY WIND TUNNEL (IA82B)

by

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Rockwell International Space Division

Prepared under NASA Contract Number NAS9-13247

by

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for

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Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	ARC 97-044
NASA Series Number:	IA82B
Model Number:	75-OTS
Test Dates:	January 23 through February 3, 1975
Occupancy Hours:	108

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RESULTS OF AN INVESTIGATION OF JET PLUME EFFECTS ON AN 0.010-SCALE MODEL (75-OTS) OF THE SPACE SHUTTLE INTEGRATED VEHICLE IN THE 9 X 7-FOOT LEG OF THE NASA/AMES UNITARY WIND TUNNEL (IA82B)

by

P. J. Hawthorne, Rockwell International Space Division

ABSTRACT

This document presents results of a wind tunnel test of the Rockwell International Space Shuttle Mated Vehicle in the NASA Ames Research Center at Moffett Field, California. The test is identified as IA82B and was conducted in the 9 X 7-foot leg of the Ames Unitary Plan Wind Tunnel.

The primary test objective was to define the base pressure environment of the first and second stage mated vehicle in a supersonic flow field from Mach 1.55 through 2.20 with simulated rocket engine exhaust plumes. The secondary objective was to obtain the pressure environment of the orbiter at various vent port locations at these same freestream conditions. The tertiary objective of the test was the definition of the Mach number environment around the base of the model with rocket plumes simulated.

Data were obtained at angles of attack from -4° through +4° at zero yaw, and at yaw angles from -4° through +4° at zero angle of attack, with rocket plume sizes varying from smaller than nominal to much greater than nominal. Failed Orbiter engine data were also obtained. Elevon hinge moments and wing panel load data were obtained during all runs.

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PLOTTED COEFFICIENTS SCHEDULE:

A) CBMW, CTMW, CNW, XWCP/L, YWCP/B versus ALPHA

B) CHEI, CHEO versus ALPHA

C) CBMW, CTMW, CNW, XWCP/L, YWCP/B versus BETA

D) CHEI, CHEO versus BETA

E) DCBMW, DCTMW, DCNW, DXWCP, DYWCP versus MACH

F) DCHEI, DCHEO versus MACH

G) DXWCP, DYWCP versus MACH

H) CP versus MACH

I) DCP versus MACH

J) CP versus R/ROD

K) DCP versus R/ROD

L) CABORB versus MACH

M) CABET versus MACH

N) CABSRB versus MACH

O) M11, M12, M13, M14, M15, M16, M17 versus MACH

P) M11, M12, M21, M22, M23, M24 versus MACH

Q) M31, M32, M33, M34, M35, M36 versus MACH

NOMENCLATURE

General

Symbol	Plot Symbol	Definition
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_l - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2, psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2, psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ρ		mass density; kg/m^3, $slugs/ft^3$

Reference & C.G. Definitions

A_b		base area; m^2, ft^2
b_{REF}	BREF	reference span; m, ft
b		model span; m, ft
c.g.		center of gravity
ℓ_{REF} $\bar{c}$	LREF	reference length, m, ft mean aerodynamic chord; m, ft
S_w	SREF	wing area or reference area; m^2, ft^2
	MRP	moment reference point

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis
$A_{T_{SRB}}$		SRB nozzle throat area, in^2
$A_{T_{MPS}}$		MPS nozzle throat area, in^2
b_w	BW	wing bending moment, about Y_o = 106., in-lbf
C_{B_W}	CBMW	wing bending moment coefficient, about Y_o = 106
$\bar{c}_e$	CE	elevon reference length, in
$C_{h_{ei}}$	CHEI	inner elevon hinge moment coefficient, about hinge line
$C_{h_{eo}}$	CHEO	outer elevon hinge moment coefficient, about hinge line
C_{N_W}	CNW	wing panel normal force coefficient
C_{p_i}	CPi	surface tap pressure coefficient, i = tap number. . . . .
C_{T_W}	CTMW	wing torsion moment coefficient, about X_o = 1307
δ_{ei}	ELV-IB	inboard elevon deflection, degrees
δ_{eo}	ELV-OB	outboard elevon deflection, degrees
ε_{MPS}	EPSLNO	expansion ratio, MPS nozzle
ε_{SRM}	EPSLNS	expansion ratio, SRM nozzle
ET	ET	external tank
h_{ei}	HEI	inner elevon hinge moment about hinge line, in-lbs

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
h_{eo}	HEO	outer elevon hinge moment about hinge line, in-lbs
Λ_{LE}	LAMBDA	leading edge sweep angle, deg.
P_s	PS	static pressure, psia
θ_j		nozzle plume boundary exit angle measured relative to the nozzle centerline
ML	ML	local Mach number
	M11	local Mach number for Orbiter rake (P142 and 1P1)
	M12	local Mach number for Orbiter rake (P141 and 1P2)
	M13	local Mach number for Orbiter rake (1S3 and 1P3)
	M14	local Mach number for Orbiter rake (1S4 and 1P4)
	M15	local Mach number for Orbiter rake (1S5 and 1P5)
	M16	local Mach number for Orbiter rake (1S6 and 1P6)
	M17	local Mach number for Orbiter rake (1S7 and 1P7)
	M21	local Mach number for external tank rake (P225 and 2P1)
	M22	local Mach number for external tank rake (2S2 and 2P2)
	M23	local Mach number for external tank rake (2S3 and 2P3)
	M24	local Mach number for external tank rake (P231 and 2P4)
	M31	local Mach number for SRB rake (3S1 and 3P1)
	M32	local Mach number for SRB rake (3S2 and 3P2)

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
	M33	local Mach number for SRB rake (3S3 and 3P3)
	M34	local Mach number for SRB rake (3S4 and 3P4)
	M35	local Mach number for SRB rake (3S5 and 3P5)
	M36	local Mach number for SRB rake (3S6 and 3P6)
MPS	MPS	main propulsion system
n_w	NW	wing panel normal force - lbf
P_i	Pi	surface pressure at ith tap number
P_c		chamber pressure, psia
P_{co}	PCORB	Orbiter chamber pressure, psia
P_{cs}	PCSRM	SRM chamber pressure, psia
P_{ei}	PEi	nozzle exit, i indicates nozzle location, psia
P_L	PL	local static pressure, psia
P_∞	PO	tunnel freestream static pressure, psia
P_t	PT	tunnel freestream total pressure, psia
P_{t_i}	PTi	local total pressure at ith probe, psia
P_{co}/P_∞	MPSCPR	Orbiter chamber to freestream pressure ratio
P_{cs}/P_∞	SRBCPR	SRB chamber to freestream pressure ratio
P_{ei}/P_∞	RPEI	exit to freestream pressure ratio at ith station
S_e	SE	elevon computation area, ft^2

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
SRB	SRB	solid rocket booster
SSME	SSME	space shuttle main engines
T_T	TTR	average tunnel total temperature °R
$T_{T_{ORB}}$	TTORB	Orbiter plume air total temperature, °R
$T_{T_{SRM}}$	TTSRM	SRM plume air total temperature, °R
T_W	TW	wing panel torsion moment, in-lbf
$\dot{w}_{SRB}$		SRB nozzle weight flow rate, lb/sec
$\dot{w}_{MPS}$		MPS nozzle weight flow rate lb/sec

Subscripts

i - Nozzle number,

1 = Top MPS nozzle,
2 = L.H. MPS nozzle,
3 = R.H. MPS nozzle,
4 = L.H. SRB nozzle,
5 = R.H. SRB nozzle,

or:

i = surface tap numbers, see figure 2i
∞ = freestream tunnel conditions
b = base
l = local
s = static conditions
t = total conditions

NOMENCLATURE (Continued)

Additions

Symbol	Plot Symbol	Definition
XC_p/ℓ_{REF}	XWCP/L	wing center of pressure as a fraction of body length
YC_p/b_{REF}	YWCP/B	wing center of pressure as a fraction of body span
$\Delta\delta_{ei}$	DELVIB	incremental inboard elevon deflection, degrees
$\Delta\delta_{eo}$	DELVOB	incremental outboard elevon deflection, degrees
ΔC_p	DCP	incremental surface tap pressure coefficient
ΔC_{B_W}	DCBMW	incremental wing bending moment coefficient, about Y_o = 106
ΔC_{T_W}	DCTMW	incremental wing torsion moment coefficient, about X_o = 1307
ΔC_{N_W}	DCNW	incremental wing panel normal force coefficient
$\Delta C_{h_{ei}}$	DCHEI	hinge moment coefficient increment for inboard elevon due to power/plume effect, power on- power off
$\Delta C_{h_{eo}}$	DCHEO	hinge moment coefficient increment for outboard elevon due to power/plume effect, power on- power off
$\Delta XC_p/\ell_{REF}$	DXWCP	incremental wing center of pressure as a fraction of body length
$\Delta YC_p/b_{REF}$	DYWCP	incremental wing center of pressure as a fraction of body span
ϕ_B	PHI	SRM base angle of roll, degrees
ϕ_O	PHI	Orbiter angle of roll, degrees
ϕ_S	PHI	SRB Mach rake angle of roll, degrees
ϕ_T	PHI	external tank angle of roll, degrees

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
X_B	XB	SRM base longitudinal distance, in
X_O	XO	Orbiter longitudinal distance, in
Y_O	YO	Orbiter lateral distance, in
Z_O	ZO	Orbiter vertical distance, in
X_S	XS	SRB Mach rake longitudinal distance, in
X_T	XT	external tank longitudinal distance, in
R		radius of tap location, in
R/R_{OD}	R/ROD	radius of tap location divided by outer radius
δ_{BF}	BDFLAP	body flap deflection angle, degrees
δ_r	RUDDER	rudder deflection angle, degrees
δ_e	ELEVON	elevon deflection angle, degrees
δ_{SB}	SPDBRK	speed brake flare angle, degrees
$1P_i$	1Pi	Orbiter Mach rakes, pitot taps (i = 1 to 7)
$1S_i$	1Si	Orbiter Mach rakes, static taps (i = 1 to 7)
$2P_i$	2Pi	external tank Mach rakes, pitot taps (i = 1 to 4)
$2S_i$	2Si	external tank Mach rakes, static taps (i = 2 to 3)
$3P_i$	3Pi	SRB Mach rakes, pitot taps (i = 1 to 6)
$3S_i$	3Si	SRB Mach rakes, static taps (i = 1 to 6)

NOMENCLATURE (Concluded)

Symbol	Plot Symbol	Definition
$C_{A_{B_{SRB}}}$	CABSRB	solid rocket booster base force coefficient
$C_{A_{B_{ET}}}$	CABET	external tank base axial force coefficient
$C_{A_{B_{ORB}}}$	CABORB	Orbiter base axial force coefficient

REMARKS

To obtain data for data sets (comprised of three data runs), the wind tunnel freestream Mach number was set, and the model nozzle blowing system pressures were set and allowed to stabilize. Pressure and panel data were then recorded at each of the five α/β combinations. Exceptions to this procedure were data sets RE6006, 009, 015, 018, 024, and 027, where the plume air pressure was varied at $\alpha = \beta = 0°$

No difficulty was encountered in bleeding off the added mass of model nozzle plume air from the tunnel circuit to maintain constant freestream conditions. During data sets RE6001 through 27, pressure rakes were mounted about the Orbiter, SRB, and ET bases. This data is presented in both coefficient form and calculated local Mach numbers.

Data in data sets RE6091 through 099 were obtained with a MSFC proposed base drag reduction ring epoxied on the rear of the tank model.

Good data confidence is assignable on the basis of model and instrumentation performance and running checks for anomalies made throughout the test program.

Hinge moment data is good, and wing normal force and bending moment data are in reasonable agreement with prior data. Wing root torsional moment data differ from expected values. However, this difference is primarily due to loads on the forward wing glove (a primary contribution to wing root torsional moment) which were not measured by the instrumentation on the model.

Zero returns on the wing gauges taken varied less than 0.4% and

sensitivity shifts were negligible. The elevon zero returns were generally less than 0.3% with zero shift of less than 0.4% except for data sets RE6001 to 005, 008, 009, 019, 021, 022 and 023, where the zero shift was 1.8% for the outer elevon hinge moments. These values are for full scale ranges which were nominally 1.05 times the maximum test loads for wing normal and bending, 3 times in torsion and 1.5 times the elevon hinge moments.

CONFIGURATIONS INVESTIGATED

The model was a blade strut mounted 0.010-scale replica of the Rockwell International first stage (Orbiter, external oxygen hydrogen tank and solid rocket boosters) Space Shuttle Vehicle. The model was used to simulate the second stage by the removal of the solid rocket boosters.

The model was fabricated entirely of Armco steel stock, with the exception of mechanical fasteners, seals, and electrical instrumentation by and under the direction of the B-1 Division of Rockwell International.

The basic Orbiter was in accord with Rockwell International drawing VL70-000140C lines with the substitution of the blunter VL70-08410 and VL70-08401 Orbital Maneuvering System (OMS) pods on the upper sidewalls and the elimination of the drag chute fairing from the vertical tail, reverting to the prior drawing, VL70-000146A. This combination has been designated - "140C modified" or VC70-000002.

The Orbiter is of blended wing body design with a double delta planform (81/45Λ_{LE}) 12% thick wing and full span elevons with a six inch interpanel gap between the independently deflectable inner and outer panels. A single centerline vertical tail with rudder and/or speedbrake capability is mounted between the two OMS pods, and a single body flap to aid in trim control during reentry from orbit is fitted on the lower trailing edge of the fuselage; the rudder/speedbrake and body flaps are not deflectable on this model. The Orbiter configuration simulated is shown in figure 2b.

The External Tank (ET) was in accord with Rockwell International

drawing VC78-000002 for general confirmation. The attach hardware was on drawing VL78-000062B and is the same as fitted to model 52T. The tank was of cylindrical cross-section and had a liquid oxygen vent valve housing with lightning rod at the front of the 612.0" radius tangent ogive nose. The outer surface simulated was what is referred to on later drawings as the outside skin line which is the surface without the TPS thickness (SOFI) added. The longeron hat section stiffners between the oxygen and hydrogen portions of the ET were simulated.

The general arrangement of External Tank is shown in Figure 2c.

The Solid Rocket Boosters (SRB) were modelled to conform to Rockwell International drawing VC77-000002A with the exception that to maintain consistency with model 88-S, the nozzle external contours were reflective of the earlier VL77-000066 drawing with a nozzle gimbal point 86.8 inches from the exit plane.

The SRB's are of cylindrical form with a flared base shielding the nozzle and forward skirt with a conical nose. A data capsule on the forward skirt, the cable systems tunnel and aft skirt stiffening struts were simulated.

The general layout of an SRB is shown in Figure 2d.

The model was basically in accord with Rockwell International Shuttle Control drawing VC72-000002 with the exceptions noted, and may be properly referred to as Modified Vehicle 4 or proposed Vehicle 5.

The general layout of the first and second stage vehicles is shown

in Figures 2a and 2e.

The Ames Unitary Tunnel high pressure air supply was utilized for cold jet plume simulation of the jet plumes eminating from the Orbiter MPS and SRB nozzles. The Orbiter MPS and the SRB nozzles were on each of two independent air supply systems which allow for separate throttling of each nozzle system.

The blowing nozzles were test flowed in calibration programs at the Rocketdyne Rocket Nozzle Test Facility to determine that a satisfactory quiescent plume shape was produced, and to calibrate initial turning angle versus chamber pressure. These calibrations were performed with an appropriate simulated air supply system, MPS or SRB, to most accurately reproduce the quiescent plume shape that could be expected with the nozzle mounted on the model, and consequently most accurately predict the Newtonian plume to be obtained at tunnel freestream conditions.

The initial turning angle is defined in Figure 2m. Results of the nozzle calibrations are tabulated in Table IV.

The plume shapes for various Mach numbers were obtained by using one nozzle contour and setting specific values of P_{co}/P_{∞} or P_{ei}/P_{∞} for each different Mach number. The nominal settings are presented in Tables IV and V for the Orbiter and SRB nozzles.

The theoretical flow rates for MPS and SRB nozzle can be obtained by the following equations:

Assume: $T_T = 560°R$ (100°F)

$A_{T_{MPS}} = .04285 \text{ in}^2$

$A_{T_{SRB}} = .32715 \text{ in}^2$

$\dot{w}_{MPS} = .00098 P_{co}$ lb/sec per MPS nozzle

$\dot{w}_{SRB} = .0074 P_{cs}$ lb/sec per SRB nozzle

The following nomenclature was used to designate Orbiter components (O_1):

Nomenclature	Orbiter Component
B_{62}	Body
C_{12}	Canopy
E_{52}	Elevon
F_{10}	Body flap
M_{16}	OMS pod
R_5	Rudder
N_{87}	MPS nozzles
N_{89}	OMS nozzle
V_8	Vertical tail
W_{127}	Wing

The nomenclature for the external oxygen hydrogen tank (T_{28}) was:

Nomenclature	Tank Component
FR_{10}	Aft attach cross beam

CONFIGURATIONS INVESTIGATED (Continued)

Nomenclature	Tank Component
T_{28}	External tank
AT_{28}	Attach structure
AT_{31}	Attach structure
AT_{32}	Attach structure
PT_{12}	ET protuberances
PT_{22}	ET protuberances
PT_{23}	ET protuberances
PT_{24}	ET protuberances
PT_{25}	ET protuberances
PT_{26}	ET protuberances
PT_{27}	ET protuberances
FL_{10}	Feedline
FL_{11}	Feedline

The nomenclature for the Solid Rocket Booster (S_{22}) was:

Nomenclature	SRB Component
S_{22}	Solid rocket booster
N_{88}	SRB nozzle
PS_{20}	SRB protuberances
PS_{21}	SRB protuberances
PS_{22}	SRB protuberances
PS_{14}	SRB protuberances
PS_{13}	SRB protuberances

CONFIGURATIONS INVESTIGATED (Concluded)

PS_{15}	SRB protuberances
PS_{16}	SRB protuberances
PT_{28}	Drag ring on tank base

The entire mated vehicle first stage was O_1 T_{28} S_{22}, and the second stage was O_1 T_{28}.

A drag reduction ring on the tank base was fitted for some runs (data sets 91 through 99). It is referred to in the nomenclature as PT_{28}, run schedule as drag ring, and is illustrated in Figure 2n. No nomenclature symbol has been assigned it.

Dimensional data are presented in Table III.

MODEL INSTRUMENTATION

Two three-pack scanivalves mounted at the base of the blade were used to accrue data from 82 surface pressure taps, distributed as follows:

Location	Number of Taps
Orbiter base	13
OMS pod base	4
Vertical	1
Body flap	5
Side of Orbiter	20
External tank	31
SRB bases	8

These pressure taps were hardlined to the connection at the scanivalve. The basic array of the pressure taps is shown in Figures 2f through i.

The numbering scheme is 100 series taps on the Orbiter, 200 series on the External Tank and 300 series on the SRB's.

Total and static pressure taps were added on the base of the model to measure local conditions upstream of the base. These are shown in Figures 2j through l. The distribution of pressure taps to the scanivalves was as listed below:

Location	Number of Taps
Orbiter base, static	9
OMS pod base, static	4
Vertical, static	1

Body flap static	5
LH side of Orbiter, static	10
Orbiter aft corner, static	5
Orbiter aft corner, totals	5
Body flap, totals	2
External tank, static	33
External tank, totals	4
RH SRB bases, static	4
LH SRB skirt, static	6
LH SRB skirt, totals	6

The numbering scheme for the Mach rakes follows the guidelines for other taps with the middle character denoting a pitot (P) or static (S) measurement, viz., 1P2 is an Orbiter pitot tap. Following determination of local Mach, the model was replumbed to the original pressure tap array.

The right hand wing was made with the panel integral with a three component strain gauged beam to allow root bending moment, root torsion moment and panel normal force to be measured. The .015 inch gap to the Orbiter fuselage was not sealed.

The left hand wing panel was rigidly attached to the fuselage of the Orbiter, but was provided with plain bearing hinged deflectable elevon with the inner and outer panels supported in torsion by individual strain gauged beams to allow elevon hinge moments to be obtained. The elevon was made with a cylindrical section lower gap and a conical section upper

gap with centerlines on the elevon hingeline so that the elevon gap will remain constant with deflection. No attempt was made to simulate the elevon flapper doors.

To provide similar model aeroelastic characteristics on both wings, the elevon arrangement on the right hand wing was identical to the left hand, but the beams were not gauged.

TEST FACILITY DESCRIPTION

IA82B was conducted in the Ames Research Center 9 x 7-foot Unitary Wind Tunnel. This tunnel is a variable density, supersonic, continuous flow type with an adjustable nozzle to permit supersonic testing over a Mach number range continuously variable from 1.5 to 2.5. The nozzle is of the asymmetric, sliding-block type in which the variation of the test section Mach number is achieved by translating, in the streamwise direction, the fixed-contour block that forms the floor of the nozzle.

Models are supported by means of stings attached to the wall-to-wall strut/BOR system of the 9 x 7-foot tunnel.

Schlieren and shadowgraph equipment is available, as well as additional force, moment, and stress monitoring instrumentation for specific models.

DATA REDUCTION

Local Mach numbers were calculated from pressure rake data utilizing a numerical solution of NACA TN-1135 equations. The measured pressures at each station (see Figures 2j through l for station definitions) were P_L and P_{T_j}. If the local Mach number was subsonic ($P_L/P_T \geq 0.5283$), then

$$M_L = \sqrt{5.0 \times \left[\left(\frac{P_T}{P_L}\right)^{2/7} - 1\right]}$$

If the local Mach number was supersonic ($P_L/P_T < 0.5283$), then:

$$\frac{P_T}{P_L} = (1.2\ M_L^2)^{3.5} \left[\frac{6.0}{7.0M_L^2 - 1.0}\right]^{2.5}$$

A tentative solution of the latter equation was used. Cases where $P_L/P_T > 1.0$ were assumed to be invalid points for calculation purposes.

The blowing systems were monitored at two nominal stations, upstream of the nozzle (chamber pressure) and at the nozzle exits. The ratios of chamber pressure to freestream static were computed:

$$\frac{P_{co}}{P_\infty} = \frac{PCORB}{PO} = MPSCPR$$

$$\frac{P_{cs}}{P_\infty} = \frac{PCSRM}{PO} = SRBCPR$$

$$\frac{P_{ei}}{P_\infty} = \frac{PEi}{PO} = RPEi$$

The plume air total temperatures, TTORB and TTSRM were also recorded.

Pressure coefficients were computed as follows:

$$\frac{P_i - P_\infty}{q} = C_{P_i}$$

where:

P_i = individual measured pressure,

for the base pressures,

i = 101 - 114 (omit 106)
= 121 - 124
= 131
= 141 - 145
= 201 - 231
= 301 - 304
= 311 - 314 (62 pressures)

and for the vent location pressures,

i = 151 - 170 (20 pressures)

The inboard elevon panel and outboard elevon panel hinge moment coefficients were computed:

$$CHEI = \frac{HEI}{S_e \bar{c}_e}$$

$$CHEO = \frac{HEO}{S_e \bar{c}_e}$$

Right hand wing computations were:

$$CNW = \frac{NW}{qS_w}$$

$$CBMW = \frac{BW}{qS_w b}$$

$$CTMW = \frac{TW}{qS_w \bar{c}}$$

DATA REDUCTION (Concluded)

The following reference dimensions were used:

Symbol	Model Scale Value	Full Scale Value
b	9.3668 in	936.68 in
c_e	0.907 in	90.70 in
$\bar{c}$	4.748 in	474.80 in
S_e	0.0210 ft^2	210.00 ft^2
S_w	0.2690 ft^2	2690.00 ft^2
b_{REF}	12.903 in	1290.3 in
ℓ_{REF}	12.903 in	1290.3 in

Note: Coefficient equations on previous page do not use the plot reference block LREF (ℓ_{REF}) and BREF (b_{REF}) values.

All the pressure plotted data figures for IA82C (DMS-DK-2219) are presented in this report. For Figures 61 through 116 and 120 through 122, test IA82B and IA82C were combined (Mach number ranges of 1.55 to 2.20 and 2.60 to 3.50, respectively) and plotted versus Mach number. Test IA82C plotted pressure data is also presented in Figures 117 and 118 versus Mach number.

TABLE I.

TEST : IA82B

DATE : Jan. 1975

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per ft x 10^6)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
1.55	4.0	6.42	120° max
2.0	3.5	5.40	120° max
2.2	3.3	4.78	120° max

BALANCE UTILIZED: NONE

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF			
SF			
AF			
PM			
RM			
YM			

COMMENTS:

TABLE II.

TEST : 97-044-1, IA82B — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE : POST TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES SRB	MPS	δ_{EI}	δ_{EO}	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) MACH	PT		α=-4	α=0	α=4	TEST RUN NUMBERS
REG 001	C.T28 S22 + RAKES		B	OFF	OFF	0	0		1.55	30.7		1	2	3	
02				<N	N							13	14	15	
03				N	N							4	5	6	
04				>N	N							7	8	9	
05				≫N	N							10	11	12	
06				0	VARY	N							70		
07				B	N	<N						66	67	68	
08					N	>N						16	17	18	
09				0	N	VARY							69		
10				B	OFF	OFF			2.0			19	20	21	
11					<N	N						55	56	57	
12					N	N						46	47	48	
13					>N	N						49	50	51	
14					≫N	N						52	53	54	
15				0	VARY	N							65		
16				B	N	<N						61	62	63	
17					N	>N						58	59	60	
18				0	N	VARY							64		

SEE SUPPLEMENTARY SCHEDULE OF RUNS 65-74

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICENTS — IDVAR (1) — IDVAR (2) — NDV

α OR β SCHEDULES

B) $\beta = 0$ @ $\alpha = \pm 4$ - $\beta = -4, 0, 4$ @ $\alpha = 0$ DEG.

C) $\beta = 0$ @ $\alpha = \pm 4^0$, $\beta = -4, -2, 0, 2, 4$ @ $\alpha = 0$

TABLE II. - Continued.

TEST: 97-044-1, IA82B — DATA SET/RUN NUMBER CORRELATION SUMMARY — DATE: POST TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION SRB	CONTROL DEFLECTION RPS	δ_{CI}	δ_{EO}	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) MACH	PT		X=-4	X=0	X=4	TEST RUN NUMBERS
REG019	$O_1 T_{28} S_{22}$ + RAKES		B	OFF	OFF	0	0		2.2	30.7		22	23	24	
20				<N	N							34	35	36	
21				N	N							25	26	27	
22				>N	N							28	29	30	
23			↓	>>N	N							31	32	33	
24			O	VARY	N								45		
25			B	N	<N							40	41	42	
26			↑	N	>N							37	38	39	
27	↓		O	N	VARY				↑				43		
28	$O_1 T_{28} S_{22}$		C	OFF	OFF				1.55			113	114	115	
29			B	<N	N							119	120	121	
30			C	N	N							116	117	118	
31			B	>N	N							122	123	★124	
32			↓	>>N	N							125	126	127	
33				N	<N							128	129	130	
34			↓	N	>N				↓			131	132	133	
35			C	OFF	OFF				2.0			92	93	94	
↓ 36	↓		B	<N	N	↓	↓		↓	↓		98	99	100	

1 7 13 19 25 31 37 43 49 55 61 67 75 75

COEFFICENTS

α OR β SCHEDULES

IDVAR (1) IDVAR (2) NO.

★ Cont.: X = -4° repeat

TABLE II. - Continued.

TEST: 97-044-1, IA82B — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: POST TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES SRB	PARAMETERS/VALUES MPS	PARAMETERS/VALUES δ_{EI}	PARAMETERS/VALUES δ_{EO}	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) MACH	PT		α=-4	α=0	α=4	TEST RUN NUMBERS
RE6037	$0, T_{25} S_{22}$		C	N	N	0	0		2.0	30.7		95	96	97	
38			B	>N	N							101	102	103	
39				>>N	N							104	105	106	
40				N	<N							107	108	109	
41				N	>N							110	111	112	
42			C	OFF	OFF				2.2			71	72	73	
43			B	<N	N							74	75	76	
44			C	N	N							77	78	79	
45			B	>N	N							80	81	82	
46				>>N	N							83	84	85	
47				N	<N							86	87	88	
48				N	>N							89	90	91	
49				OFF	OFF	4			1.55			134	135	136	
50				N	N							137	138	139	
51				OFF	OFF				2.0			143	144	145	
52				N	N							140	141	142	
53				OFF	OFF				2.2			146	147	148	
54				N	N							149	150	151	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICENTS — IDVAR (1) — IDVAR (2) — NDV

α OR β SCHEDULES

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TABLE II. - Continued.

TEST: 97-044-1, IA82B — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: POST TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES SAS	PARAMETERS/VALUES MPS	PARAMETERS/VALUES δE3	PARAMETERS/VALUES δE2	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) MACH	PT		α=-4	α=0	α=4				TEST RUN NUMBERS
REG055	0, T27, S22		B	OFF	OFF	4	-4		1.55	30.7		154	153	152				
56				N	N							155	156	157				
57				OFF	OFF				2.0			158	159	160				
58				N	N							161	162	163				
59				OFF	OFF				2.2			164	165	166				
60			V	N	N							167	168	169				
61			C	OFF	OFF	8			1.55			170	171	172				
62				N	N							173	174	175				
63				OFF	OFF				2.0			176	177	178				
64				N	N							179	180	181				
65				OFF	OFF				2.2			182	183	184				
66				N	N							185	186	187				
67			B	OFF	OFF	10			1.55			188	189	190				
68				N	N							191	192	193				
69				OFF	OFF				2.0			194	195	196				
70				N	N							197	198	199				
71				OFF	OFF				2.2			203	204	205				
72				N	N							200	201	202				

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICENTS — IDVAR (1) — IDVAR (2) — NDV

α OR β SCHEDULES

DS 001

TABLE II. - Continued.

TEST: 97-044-1, IA82B — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: POST TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES SRB	PARAMETERS/VALUES MPS	PARAMETERS/VALUES δEI	PARAMETERS/VALUES δEO	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) MACH	PT		α=-4	α=0	α=4	TEST RUN NUMBERS
RE6073	O, T28 S22		B	OFF	OFF	10	0		1.55	30.7		206	207	208	
74				N	N							209	210	211	
75				OFF	OFF				2.0			212	213	214	
76				N	N							215	216	217	
77				OFF	OFF				2.2			218	219	220	
78				N	N							221	222	223	
79				OFF	OFF	8			1.55			224	225	226	
80				N	N							227	228	229	
81				OFF	OFF				2.0			230	231	232	
82				N	N							233	234	235	
83				OFF	OFF				2.2			236	237	238	
84				N	N							239	240	241	
85	#1 MPS OUT			N	N	0			1.55			248	249	250	
86				N	N				2.0			242	243	244	
87				N	N				2.2			245	246	247	
88	#2 MPS OUT			N	N				1.55			251	252	253	
89				N	N				2.0			254	255	256	
90				N	N				2.2			257	258	259	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICENTS — IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

TABLE II. - Concluded.

TEST: 97-044-1, IA82B — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: POST TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES SRB	PS	δEI	δEO	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) MACH	PT		K=-4	K=0	K=4	TEST RUN NUMBERS
RE6091	$O_1T_{28}S_{22}$ + DRAG RING		B	OFF	OFF	0	0		1.55	30.7		278	279	280	
92				N	N							281	282	283	
93				>>N	N							284	285	286	
94				OFF	OFF				2.0			269	270	271	
95				N	N							272	273	274	
96				>>N	N							275	276	277	
97				OFF	OFF				2.2			260	261	262	
98				N	N							263	264	265	
99				>>N	N							266	267	268	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICENTS — IDVAR (1) — IDVAR (2) — NDV

α OR β SCHEDULES

TABLE III

MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B_{62}

GENERAL DESCRIPTION : Configuration 140 C orbiter fuselage, MCR 200-R_4. Similar to 140 A/B fuselage except aft body revised and improved midbody-wing-boot fairing. X_o = 940 to X_o = 1040.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000140C, -000202C, -000205A, -000200B, -000203A.

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (IML: Fwd Sta. X_o=238), In.	1290.3	12.903
Length (OML: Fwd Sta X_o=235), In.	1293.3	12.933
Max Width(@ X_o = 1528.3), In.	264.0	2.640
Max Depth (@ X_o = 1464), In.	250.0	2.500
Fineness Ratio	4.899	4.899
Area - Ft^2		
Max. Cross-Sectional	340.885	.03409
Planform		
Wetted		
Base		

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TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT : CANOPY - C_{12}

GENERAL DESCRIPTION : Configuration140 C, orbiter canopy, vehicle cabin No. 31 updated to MCR 200-R_4. Used with fuselage B_{62}.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000140C, -000202B, -000204

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o= 434.643-578), in.	143.357	1.434
Max Width (@ X_o = 513.127), In.	152.412	1.524
Max Depth (Z_o=501 to 449.39), In.	51.61	0.516
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III (Cont'd)

MODEL COMPONENT: ELEVON - E_{52}

GENERAL DESCRIPTION: Elevon for configuration 140C. Hingeline at X_o = 1387, elevon split line X_w = 312.5, 6.0" gaps, beveled edges, and centerbodies.

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000140C, -006089, -006092, SS-A01260

DIMENSIONS: (Data for One Side)	FULL-SCALE	MODEL SCALE
Area - Ft^2	210.0	0.021
Span (equivalent), In.	349.2	3.492
Inb'd equivalent chord, In.	118.0	1.180
Outb'd equivalent chord, In.	55.19	0.552
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.2096	0.2096
At Outb'd equiv. chord	0.4004	0.4004
Sweep Back Angles, degrees		
Leading Edge	0.0	0.0
Tailing Edge	- 10.056	-10.056
Hingeline	0.00	0.0
Area Moment (Product of Area & $\bar{c}$) Normal to hingeline, Ft^3	1587.25	0.0016
Mean Aerodynamic Chord, In.	90.7	0.907
Hingeline dihedral (origin at Z_0 = 261.3509), deg.	5.229	5.229

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY FLAP - F_{10}

GENERAL DESCRIPTION : Configuration 140C - body flap. Hingeline located at X_o = 1532, Z_o = 238.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000140C, VL70-355114

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o=1525.5 to X_o=1613), In.	87.50	0.875
Max Width (@ L.E., X_o = 1525.5), In.	256.00	2.560
Max Depth (X_o = 1532), In.	19.798	0.198
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional (@H.L.)	35.196	.00352
Planform	135.00	.01350
Wetted		
Base (X_o = 1613)	4.89	.0005

TABLE III (CONT'D)
MODEL DIMENSIONAL DATA

MODEL COMPONENT : OMS POD - M_{14}

GENERAL DESCRIPTION : Configuration 140C Orbiter OMS pod - short pod.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-008401, VL70-008410

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta X_o=1310.5), In.	258.50	2.585
Max Width (@ X_o = 1511), In.	136.8	1.368
Max Depth (@ X_o = 1511), In.	74.70	0.747
Fineness Ratio	2.484	2.484
Area - Ft^2		
Max. Cross-Sectional	58.864	0.00589
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL COMPONENT: RUDDER - R_5

GENERAL DESCRIPTION: Configuration 140C orbiter rudder (identical to configuration 140A/B rudder).

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000146B, -000095

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area - Ft^2	100.15	0.01002
Span (equivalent) , In.	201.00	2.010
Inb'd equivalent chord , In.	91.585	0.916
Outb'd equivalent chord , In.	50.833	0.508
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.83	34.83
Trailing Edge	26.25	26.25
Hingeline	34.83	34.83
Area Moment (Product of Area and $\bar{c}$), Ft^3	610.92	0.000610
Mean Aerodynamic Chord	73.2	0.732

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: MPS NOZZLES - N_{67}

GENERAL DESCRIPTION: Flow-through MPS nozzles.

MODEL SCALE: 0.010

DRAWING NUMBER: 32-A01279

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NO. 1.55, 2.0, 2.2		
Length - In.		
Gimbal Point to Exit Plane	157.0	1.570
Throat to Exit Plane	181.55	1.816
Diameter - In.		
Exit	90.435	0.9044
Throat	23.3502	0.2335
Inlet		
Area - ft^2		
Exit	44.607	0.00446
Throat	2.974	0.000297
Gimbal Point (Station) - In.		
Upper Nozzle		
X_o	1445.00	14.450
Y_o	0.0	0.0
Z_o	443.00	4.430
Lower Nozzles		
X_o	1468.17	14.682
Y_o	± 53.0	± 0.530
Z_o	342.64	3.426
Null Position - Deg.		
Upper Nozzle		
Pitch	16°	16°
Yaw	0°	0°
Lower Nozzle		
Pitch	10°	10°
Yaw	0°	0°

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLES - N_{80}

GENERAL DESCRIPTION: OMS nozzle in stowed position which is outboard 8 deg and down 7deg from null position. Use with M16.

MODEL SCALE = 0.010

DRAWING NO. SS-A01279

DIMENSIONS	FULL SCALE	MODEL SCALE
Mach No. 1.55, 2.0, 2.2		
Length ~ in.		
Gimbal Point to Exit Plane	56.0	0.560
Throat to Exit Plane		
Diameter ~ in.		
Exit (O.D.)	50.0	0.50
Throat		
Inlet		
Area ~ ft^2.		
Exit		
Throat		
Gimbal Point (station) ~ in.		
X_o	1518.00	15.180
Y_o	88.00	0.880
Z_o	492.0	4.920
Null Position ~ deg.		
Pitch	15°49'	15°49'
Yaw	6°30'	6°30'

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TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: VERTICAL - V_8

GENERAL DESCRIPTION: Configuration 140C, orbiter vertical tail (identical to configuration 140A/B vertical tail).

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000140C, -000146B

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft^2	413.253	0.0413
Planform	315.720	3.157
Span (Theo) - In.	1.675	1.675
Aspect Ratio	0.507	0.507
Rate of Taper	0.404	0.404
Taper Ratio		
Sweep-Back Angles, Degrees.		
Leading Edge	45.000	45.000
* Trailing Edge	26.2	26.2
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.500	2.685
Tip (Theo) WP	108.470	1.085
MAC	199.808	1.998
Fus. Sta. of .25 MAC	1463.50	14.635
W.P. of .25 MAC	635.522	6.355
B.L. of .25 MAC	0.000	0.000
Airfoil Section		
Leading Wedge Angle - Deg.	10.000	10.000
Trailing Wedge Angle - Deg.	14.920	14.920
Leading Edge Radius	2.00	0.02
Void Area	13.17	0.00131
Blanketed Area	0.00	0.000

TABLE IVI (CONT'D)

MODEL COMPONENT: WING-W 127

GENERAL DESCRIPTION: Configuration 140C - orbiter wing, MCR 200-R4, similar to 140A/B wing W116 but with refinements: improved wing-boat-midbody fairing (X_o = 940 to X_o = 1040); elevon split line relocated from Y_o=281 to Y_o=312.5.

MODEL SCALE: 0.010

TEST NO.

DWG. NO. VL70-000140C, -000200B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2	2690.00	0.2690
Planform	936.68	9.3668
Span (Theo In.	2.265	2.265
Aspect Ratio	1.177	1.177
Rate of Taper	0.200	0.200
Taper Ratio	3.500	3.500
Dihedral Angle, degrees	0.500	0.500
Incidence Angle, degrees	3.000	3.000
Aerodynamic Twist, degrees		
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	-10.056	-10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.0.0.	680.24	6.892
Tip, (Theo) B.P.	137.85	1.379
MAC	474.81	4.748
Fus. Sta. of .25 MAC	1136.83	11.368
W.P. of .25 MAC	290.58	2.906
B.L. of .25 MAC	182.13	1.821
EXPOSED DATA		
Area (Theo) Ft^2	1751.50	0.1752
Span, (Theo) In. BP108	720.68	7.207
Aspect Ratio	2.059	2.059
Taper Ratio	0.245	0.245
Chords		
Root BP108	562.09	5.621
Tip 1.00 $\frac{b}{2}$	137.85	1.379
MAC	392.83	3.928
Fus. Sta. of .25 MAC	1185.08	11.860
W.P. of .25 MAC	294.30	2.943
B.L. of .25 MAC	251.77	2.518
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root $\frac{b}{2}$ =	0.113	0.113
Tip $\frac{b}{2}$ =	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff Planform Area Ft^2	113.13	0.01132
Leading Edge Intersects Fus M. L. @ Sta	500.00	5.000
Leading Edge Intersects Wing @ Sta	1024.00	10.240

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TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: FAIRING - FR_{10}

GENERAL DESCRIPTION: Umbilical door fairing between aft ET/orbiter attach structure.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at	X_T	2052.0	20.520
Length		193.00	1.930
Width		15.00	0.150

TABLE III (CONT'D)
MODEL DIMENSIONAL DATA

MODEL COMPONENT : EXTERNAL TANK - T_{28}

GENERAL DESCRIPTION : Same as T_{20} except larger.

MODEL SCALE: 0.010

DRAWING NUMBER : VL72-000143D, VL78-000063
(Dimensions are to tank structural OML, TPS not included)

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length , In.	1844.275	18.443
Max Width , Diameter, In.	331.00	3.310
Max Depth		
Fineness Ratio	5.687	5.687
Area - Ft^2		
Max. Cross-Sectional	597.58	0.0598
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: ATTACH STRUCTURE - AT_{28}

GENERAL DESCRIPTION: Rear orbiter to ET attach structure (LH and RH) (2 members).

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, VL78-000062B

DIMENSIONS:	MEMBER		FULL SCALE	MODEL SCALE
	#1	X_o	1317.00	13.170
		Y_o	- 96.50 (LH)	- 0.965
			96.50 (RH)	0.965
		Z_o	267.50	2.675
		X_T	2058.00	20.580
		Y_T	- 125.68 (LH)	-1.257
			125.68 (RH)	1.257
		Z_T	515.5	5.155
	#2	X_o	1317.00	13.170
		Y_o	- 96.50 (LH)	- 0.965
			96.50 (RH)	0.965
		Z_o	267.50	2.675
		X_T	1872.00	18.720
		Y_T	- 125.68 (LH)	- 1.257
			125.68 (RH)	1.257
		Z_T	504.5	5.045
Diameter, In.	#1		11.5	0.115
	#2		15.5	0.155

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: ATTACH STRUCTURE - AT_{31}

GENERAL DESCRIPTION: Rear ET to SRB attach structure (LH and RH), 3 members

MODEL SCALE: 0.010 MODEL DRAWING: _____

DRAWING NO.: VL78-000063, -000062B, -000066

DIMENSIONS:

MEMBER		FULL SCALE	MODEL SCALE
#1	X_T	2058.00	20.580
	Y_T	- 171.50 (LH)	-1.715
		171.50 (RH)	1.715
	Z_T	457.00	4.570
	X_S	1511.00	15.110
	Y_S	53.24	0.5324
	Z_S	57.00	0.570
#2	X_T	2058.00	20.580
	Y_T	- 163.85	- 1.639
	Z_T	449.81	4.498
	X_S	1511.00	15.110
	Y_S	76.56	0.766
	Z_S	15.73	0.157
#3	X_T	2058.00	20.580
	Y_T	- 161.72	- 1.617
	Z_T	343.00	3.430
	X_S	1511.00	15.110
	Y_S	53.24	0.532
	Z_S	- 57.00	- 0.570

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: ATTACH STRUCTURE - AT_{32}

GENERAL DESCRIPTION: Forward orbiter/ET attach structure (2 member structure)

MODEL SCALE: 0.010 MODEL DRAWING NO.: _____

DRAWING NO.: VL78-000062B, Martin Marietta 8260020914

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Member #1:	X_o	388.15	3.882
	Y_o	0.0	0.0
	Z_o	LWR LML	LWR LML
	X_T	1129.9	11.299
	Y_T	46.50	4.650
	Z_T	562.58	5.626
Member #2:	X_T	388.15	3.882
	Y_T	0	0
	Z_T	LWR LML	LWR LML
	X_o	1129.9	11.299
	Y_o	- 46.50	- 0.465
	Z_o	562.58	5.626
Attach structure dia., in.		6.0	0.060

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: ET PROTUBERANCE - PT_{12}

GENERAL DESCRIPTION: Lightning rod attached to ET nose.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000068B

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length - In.	30.90	0.309
Diameter - In.	3.20	0.032

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: ELECTRICAL LINE - PT_{22}

GENERAL DESCRIPTION: Left-hand electrical conduit line on T_{28}.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, VL78-000062B

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1084.333	10.843
	Y_T	- 99.591	- 0.996
	Z_T	- 139.620	- 1.396
Trailing edge at:	X_T	2058.00	20.580
	Y_T	- 99.591	- 0.996
	Z_T	- 139.620	- 1.396
Conduit size:		2.0 x 6.0	0.02 x 0.06

Centerline of line located radially at $\phi = 35.5^{\circ}$

TABLE III (CONT'D)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: LO_2 RECIRCULATION LINE - PT_{23}

GENERAL DESCRIPTION: LO_2 recirculation line on right-hand upper side of T_{28}.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, VL78-000062B, Martin Marietta 82600207000

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1040.667	10.407
	Y_T	94.169	0.942
	Z_T	540.934	5.409
Trailing edge at:	X_T	2062.920	20.629
	Y_T	70.000	0.700
	Z_T	573.934	5.739
Diameter of line		4.0	0.040

Centerline of lines located radially at $\phi = 33^{\circ}45'$ (Right of TDC looking forward).

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: LH_2 RECIRCULATION LINE PT_{24}

GENERAL DESCRIPTION: LH_2 recirculation line on T_{28}.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, VL78-000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1040.667	10.407
	Y_T	- 94.169	- 0.942
	Z_T	540.934	5.409
Trailing edge at:	X_T	2062.920	20.629
	Y_T	- 70.00	- 0.700
	Z_T	573.934	5.739
Diameter of line		4.00	0.040

Centerline of line located radially at $\phi = 33^{0}45'$

(Left of TDL looking forward)

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: ELECTRICAL LINE - FT_{25}

GENERAL DESCRIPTION: Right-hand aft electrical conduit line on $T_{.8}$ with LH_2 pressure sensor line and LO_2 vent valve actuator line.

MODEL SCALE: 0.010

DRAWINGS NO.: VL78-000063, VL78-000062B, Martin Marietta 82600207000

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1084.333	10.843
	Y_T	99.591	0.996
	Z_T	139.620	1.396
Trailing edge at:	X_T	2058.00	20.580
	Y_T	99.591	0.996
	Z_T	139.620	1.396
Conduit size		2.0 x 6.0	0.020 x 0.06

Centerline of line located radially at $\phi = 35.5^{\circ}$

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: LO_2 PRESSURE LINE - PT_{26}

GENERAL DESCRIPTION: LO_2 pressure line on the T_{28}.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, VL78-000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	360.733	3.607
	Y_T	15.145	0.151
	Z_T	407.718	4.077
Trailing edge at:	X_T	2083.5	20.835
	Y_T	63.25	0.633
	Z_T	609.00	6.090
Centerline of line located radially at $\phi = 27^\circ$			
Line diameter		2.0	0.020

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: ELECTRICAL LINE - PT_{27}

GENERAL DESCRIPTION: Electrical conduit on the right-hand forward section of T_{28}.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000062B

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	360.733	3.607
	Y_T	11.549	0.115
	Z_T	412.474	4.125
Trailing edge at:	X_T	876.273	8.763
	Y_T	226.114	2.261
	Z_T	646.774	6.468

Centerline of conduit located radially at $\phi = 47.5^{\circ}$

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: FEEDLINE - FL_{10}

GENERAL DESCRIPTION: LH_2 feedline on upper left-hand side of T_{28}.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, VL78-000062B

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	2071.5	20.715
	Y_T	- 70.0	- 0.700
	Z_T	573.934	5.739
Trailing edge at:	X_T	2081.8	20.818
	Y_T	- 70.0	-0.700
	Z_T	584.059	5.841
Diameter of line (.17.0 I.D.)		18.160	0.182

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: FEEDLINE: - FL_{11}

GENERAL DESCRIPTION: LO_2 feedline on upper right-hand of T_{28}.

MODEL SCALE: 0.010

DRAWING NO.: VL78-000063, VL78-000062B

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1000.667	10.007
	Y_T	70.00	0.700
	Z_T	150.519	1.505
Trailing edge at:	X_T	2071.5	20.715
	Y_T	70.00	0.700
	Z_T	573.934	5.739
Diameter of line (17.0 I.D.)		18.16 O.D.	0.182

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT : BOOSTER SOLID ROCKET MOTOR - S_{22}

GENERAL DESCRIPTION : The BSRM is an external propulsion system which is jettisoned and recoverable after burnout. The BSRM's can be refurbished and reused after recovery.

MODEL SCALE: 0.010

DRAWING NUMBER : VC77-000002, VC70-000002

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length, In.	1789.60	17.896
Max Width , Tank Dia., In.	146.00	1.460
Max Depth, Aft shroud dia., In.	208.20	2.082
Fineness Ratio	8.596	8.596
Area - Ft^2		
Max. Cross-Sectional	236.423	0.0236
Planform		
Wetted		
Base		
WP of BSRM centerline (Z_T)	400.00	4.00
FS of BSRM nose (X_T)	743.0	7.430
BP of BSRM centerline (Y_T)	250.5	2.505

TABLE III (CONT'D)

MODEL COMPONENT: SRB NOZZLES - N88

GENERAL DESCRIPTION: Flow-through SRB nozzle simulator ϵ = 7.0 prototype.

MODEL SCALE = 0.010

DRAWING NO. SS-A01281

MACH NO.: 1.55, 2.0, 2.2

DIMENSIONS	FULL SCALE	MODEL SCALE
Mach No. 1.55, 2.0, 2.2		
Length ~ in.		
Gimbal Point to Exit Plane	86.8	0.868
Throat to Exit Plane	112.135	1.121
Diameter ~ in.		
Exit	144.290	1.443
Throat	64.53.	0.645
Inlet		
Area ~ ft^2.		
Exit	356.738	0.03567
Throat	22.712	0.00227
Gimbal Point (station) ~ in.		
X_B	1902.6	19.026
Y_B	± 250.5	± 2.505
Z_B		
Null Position ~ deg.		
Pitch	0	0
Yaw	0	0

TABLE III (CONT'D)
MODEL DIMENSIONAL DATA

MODEL COMPONENT : SRB PROTUBERANCES - PS_{20}

GENERAL DESCRIPTION : Electrical tunnel on SRB side, 30 deg taper leading edge, circular cross-section with mounting flange. Tunnel discontinued from X_B = 1504.25 to 1517.75.

MODEL SCALE: 0.010 MODEL DRAWING: SS-A01281

DRAWING NUMBER : VC77-000002A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length , In.	1384.57	13.846
Max Width	13.00	0.130
Max Depth	3.72	0.037
Radius	6.19	0.0619
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		
Taper at leading edge	30 deg.	30 deg.

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: CIRCUMFERENTIAL STIFFENER - PS_{21}

GENERAL DESCRIPTION: Four-ring stiffeners located at aft end of the solid rocket boosters. The stiffener is a curved I-beam.

MODEL SCALE: 0.010

DRAWING NO.: VC77-000002

DIMENSIONS:	FULL SCALE	MODEL SCALE
Height	4.7	0.047
Length, In.	4.0	0.040
Locations:	1602.0	
	1694.4	
	1729.0	
	1771.4	

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: SRB PROTUBERANCE - PS_{22}

GENERAL DESCRIPTION: Tie-down fixture on aft skirt. Total of four mounted @ 30 deg to the vertical SRM centerline.

MODEL SCALE: 0.010

DRAWING NO.: VC77-000002

DIMENSIONS:	FULL SCALE	MODEL SCALE
Leading edge @ X_B =	1855.2	18.552
Trailing edge @ X_B =	1925.2	19.252
Width, maximum , In.	14.5	0.145
Height, maximum	9.0	0.090
Plan taper	12°	12°
OAC	70.0	0.700

Tapers from zero height at 1855.2 to 9" @ 1925.2

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: SOLID ROCKET BOOSTER - EXTERNAL TANK ATTACH - PS_{14}

GENERAL DESCRIPTION: Two ring stiffeners located at aft end of solid rocket boosters. The stiffener is curved L-beam.

MODEL SCALE: 0.010

DRAWING NO.: VC77-000002

DIMENSIONS:		FULL SCALE	MODEL SCALE
Height, In.		8.00	0.0800
Length, In.		3.00	0.0300
Location	X_B = 1511.00		

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: CIRCUMFERENTIAL STIFFENER - PS_{13}

GENERAL DESCRIPTION: Ring stiffener located at the point where the [illegible] flares. The stiffener is I-beam.

MODEL SCALE: 0.010

DRAWING NO.: VC77-000002

DIMENSIONS:

	FULL SCALE	MODEL SCALE
Height, In.	6.50	0.065
Length, In.	4.00	0.040
Location:	X_B = 1833.70	

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: Data capsule and CAMERA - PS_{15}

GENERAL DESCRIPTION: Cylinder located on forward skirt of SRB containing camera and data storage equipment, mounted longitudinally.

MODEL SCALE: 0.010

DRAWING NO.: VC77-000002

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length, In. at X_B = 403.38	36.00	0.360
Diameter, In.	9.00	0.090

TABLE III (CONT'D)

MODEL DIMENSIONAL DATA

MODEL COMPONENT: FORWARD ATTACH - PS_{16}

GENERAL DESCRIPTION: On SRB, forward SRB-ET attach

MODEL SCALE: 0.010

DRAWING NO.: VC77-000002

DIMENSIONS:	FULL SCALE	MODEL SCALE
Height, In.	9.50	0.0950
Inner:		
Length, In, @ X_B = 442.70	44.28	0.443
Width, In.	16.00	0.160
Outer:		
Length, In. @ X_B = 442.70	23.85	0.239
Width, In.	11.00	0.110

TABLE III. – Concluded

MODEL DIMENSIONAL DATA

MODEL COMPONENT : PT28 - DRAG RING

GENERAL DESCRIPTION : CYLINDRICAL EXTENTION OF THE E.T. TERMINATING IN A BLUNT BASE AT X_T = 2081.0, THE REMAINDER OF THE ELLIPTICAL BASE IS RETAINED. X_T = 2081.0 IS 20.0 INCHES AFT OF REAR COVER BUT CIRCLE FLANGE ON BASE OF TANK.

DRAWING NUMBER : NONE

SCALE : 0.010

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length *	32.1	0.321 IN
Max Diameter	331.0	3.31 IN
Max Depth		
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

* FROM TANGENCY POINT, X_T = 2048.9

TABLE IV. MPS BLOWING SYSTEM SET PRESSURES

MACH M_∞	P_T	CHAMBER PRESSURE		
		$\theta_j = N+3$	$\theta_j = N$	$\theta_j = N-3$
1.55	14.7	1341	1006	745
2.0	↓	1616	930	648
2.2		1705	1018	605
2.6		1621	1091	685
3.0		1520	1040	656
3.5		1486	926	598
1.55	10.7	976	732	542
2.0	↓	1177	677	472
2.2		1241	741	440
2.6		1179	793	499
3.0		1106	757	477
3.5		1078	672	434
1.55	6.7	611	458	339
2.0	↓	736	424	295
2.2		778	464	276
2.6		739	497	313
3.0		692	473	299
3.5		685	427	276

$\theta_j = N+3$ INDICATES 3° OVER PROTOTYPE PLUME TURNING ANGLE

$= "> N"$

$\theta_j = N-3 = "< N"$

TABLE V. - SRB BLOWING SYSTEM SET PRESSURES

MACH M_∞	P_T	CHAMBER PRESSURE			
		$\theta_i = N+10$	$\theta_i = N+5$	$\theta_i = N$	$\theta_i = N-5$
1.55	14.7	1266	804	547	372
2.0	↓	1597	846	560	357
2.2		1925	921	514	344
2.6		3095	1378	627	332
3.0		3200	1900	868	388
3.5		——	1708	1148	512
1.55	10.7	921	585	398	271
2.0	↓	1163	616	408	260
2.2		1401	671	374	250
2.6		2251	1002	456	241
3.0		2328	1382	632	282
3.5		——	1239	833	371
1.55	6.7	577	367	250	170
2.0	↓	728	385	255	163
2.2		878	420	235	157
2.6		1411	628	286	151
3.0		1456	865	395	177
3.5		——	779	524	233

$\theta_i = N+10$ = "7N"

$= N+5$ = "7N"

$= N$

$= N-5$ = "<N"

TABLE VI.- BASE AND BODY FLAP PRESSURE TAP LOCATION

	TAP NUMBER	Y_o	Z_o	X_o
ORBITER BASE	101	0	324.7	
	102	-53.0	309.4	
	103	53.0	309.4	
	104	-110.0	324.7	
	105	110.0	324.7	
	106	DELETED		
	107	-103.0	383.3	
	108	103.0	383.3	
	109	0	396.1	
	110	-25.0	401.9	
	111	25.0	401.9	
	112	-80.0	433.6	
	113	80.0	433.6	
	114	0	494.2	
OMS	121	-60.0	505	
	122	60.0	505	
	123	-120.0	460	
	124	120.0	460	
VERTICAL	131	0	534.0	
BODY FLAP	141	-75		1565.0
	142	0		
	143	75		
	144	-75		
	145	75		
	146	0		

TABLE VII.
IA82B COEFFICIENT SCHEDULE

Dataset Type	Dataset Sequence	1st ID	2nd ID	Coefficients 1	2	3	4	5	6	7	8	9	10
RE6XXX	1-5, 7-8, 10-14, 16-17, 19-23,25-26,28-99	ALPHA	BETA	MACH	CNW	CTMW	CBMW	CHEI	CHEO				
	6, 15, 24	ALPHA	SRBCPR	BETA	MACH	CNW	CTMW	CBMW	CHEI	CHEO			
	9, 18, 27	ALPHA	MPSCPR	BETA	MACH	CNW	CTMW	CBMW	CHEI	CHEO			
AE6XXX	28-99	ALPHA	BETA	CP151	CP152	CP153	CP154	CP155	CP156	CP157	CP158	CP159	CP160
BE6XXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26, 28-99	ALPHA	BETA	CP161	CP162	CP163	CP164	CP165	CP166	CP167	CP168	CP169	CP170
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
CE6XXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26	ALPHA	BETA	CP101	CP102	CP103	CP109	CP110	CP111				
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓	↓				
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓	↓				
	28-99	ALPHA	BETA	CP101	CP102	CP103	CP104	CP105	CP107	CP108	CP109	CP110	CP111
DE6XXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26, 28-99	ALPHA	BETA	CP112	CP113	CP114	CP121	CP122	CP123	CP124	CP131		
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓	↓	↓	↓		
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓	↓	↓	↓		

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TABLE VII. - Continued.

Dataset Type	Dataset Sequence	1st ID	2nd ID	Coefficients									
				1	2	3	4	5	6	7	8	9	10
EE6XXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26, 28-99	ALPHA	BETA	CP141	CP142	CP143	CP144	CP145					
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓					
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓					
RE6HXX	1-5, 7-8, 10-14, 16-17, 10-23, 25-26, 28-99	ALPHA	BETA	CP201 - CP231 as a function of radius and PHI values									
	6, 15, 24	ALPHA	SRBCPR										
	9, 18, 27	ALPHA	MPSCPR										
IE6XXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26	ALPHA	BETA	Q(PSF)	3P5	3P6	CP231	CP301	CP302	CP303	CP304	3S5	3S6
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	28-99	ALPHA	BETA	Q(PSF)	CP231	CP301	CP302	CP303	CP304	CP311	CP312	CP313	CP314
JE6XXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26	ALPHA	BETA	1P1	1P2	1P3	1P4	1P5	CP142	CP141	1S3	1S4	1S5
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

TABLE VII. - Concluded.

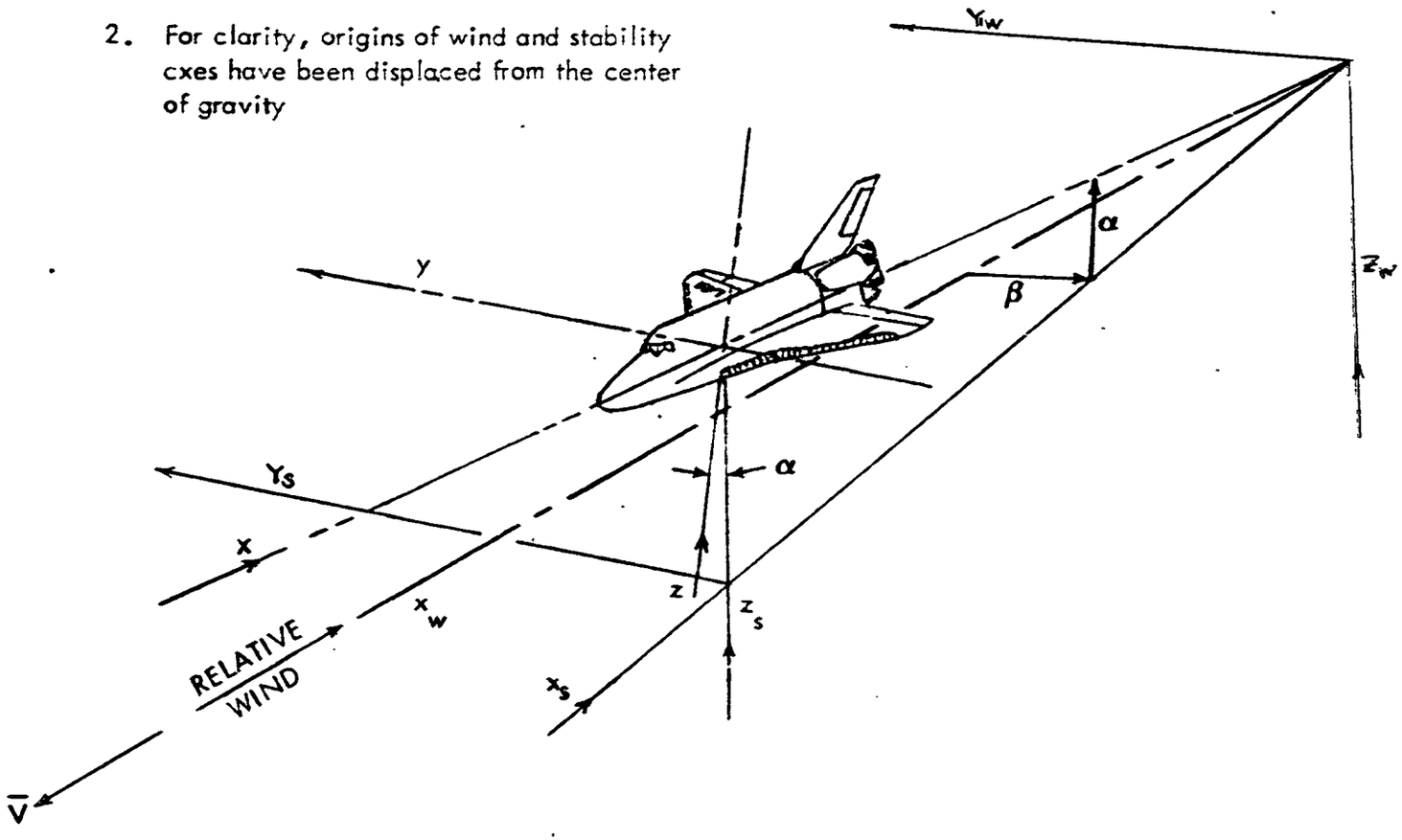
Dataset Type	Dataset Sequence	1st ID	2nd ID	Coefficients									
				1	2	3	4	5	6	7	8	9	10
XE6XXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26	ALPHA	BETA	1P6	1P7	2P1	2P2	2P3	1S6	1S7	CP225	2S2	2S3
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
LE6YXX	1-5, 7-8, 10-14, 16-17, 19-23, 25-26	ALPHA	BETA	2P4	3P1	3P2	3P3	3P4	CP231	3S1	3S2	3S3	3S4
	6, 15, 24	ALPHA	SRBCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	9, 18, 27	ALPHA	MPSCPR	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

Note: ID = independent variable

Notes:

1. Positive directions of angles are indicated by arrows

2. For clarity, origins of wind and stability cxes have been displaced from the center of gravity

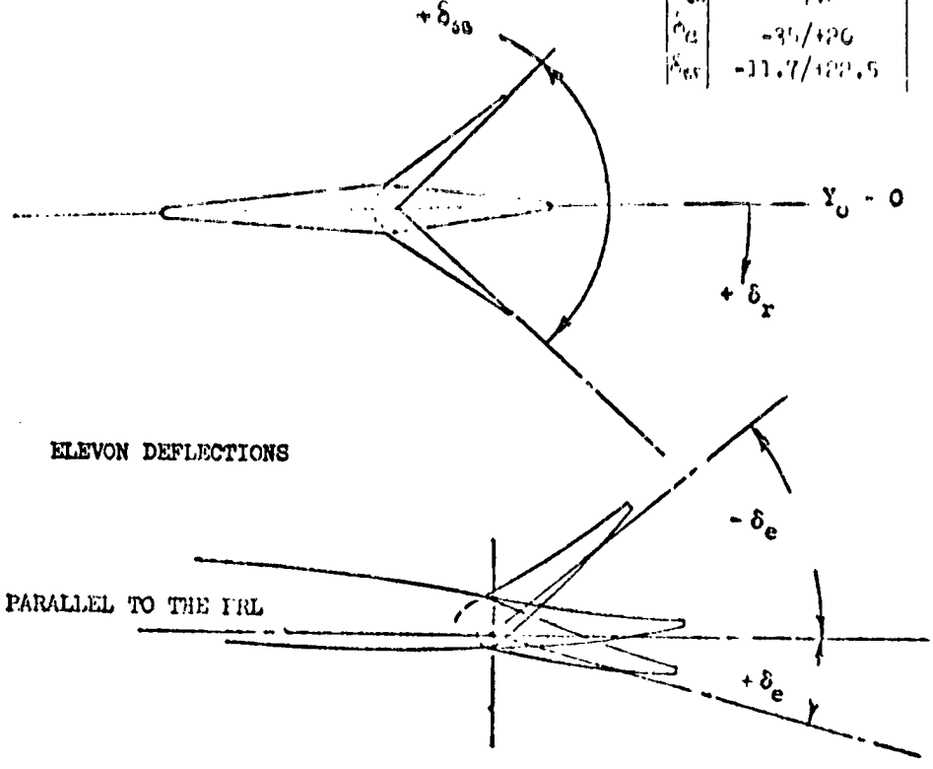


a. General

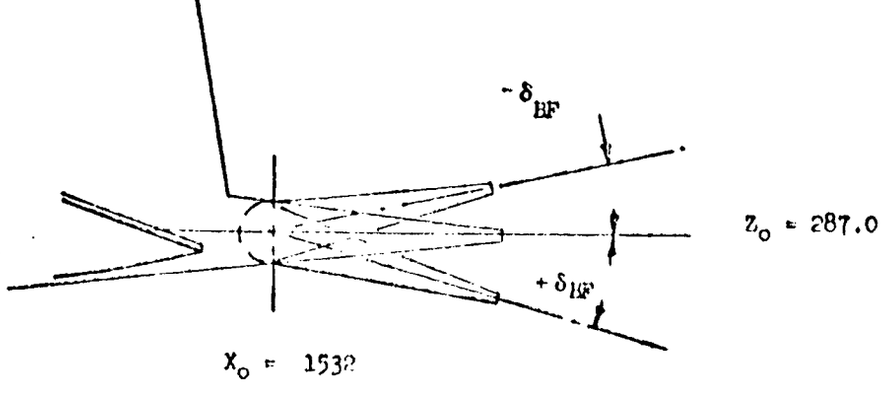
Figure 1. - Axis Systems.

RUDDER AND SPEED BRAKE DEFLECTIONS
(PARALLEL TO THE FRL)

	Maximum Deflections	
	Vehicle	Test IAH2B
δ_r	22.8	0
δ_{sb}	87.2	0
δ_e	-35/+20	-6/+10
δ_{es}	-11.7/+22.5	0

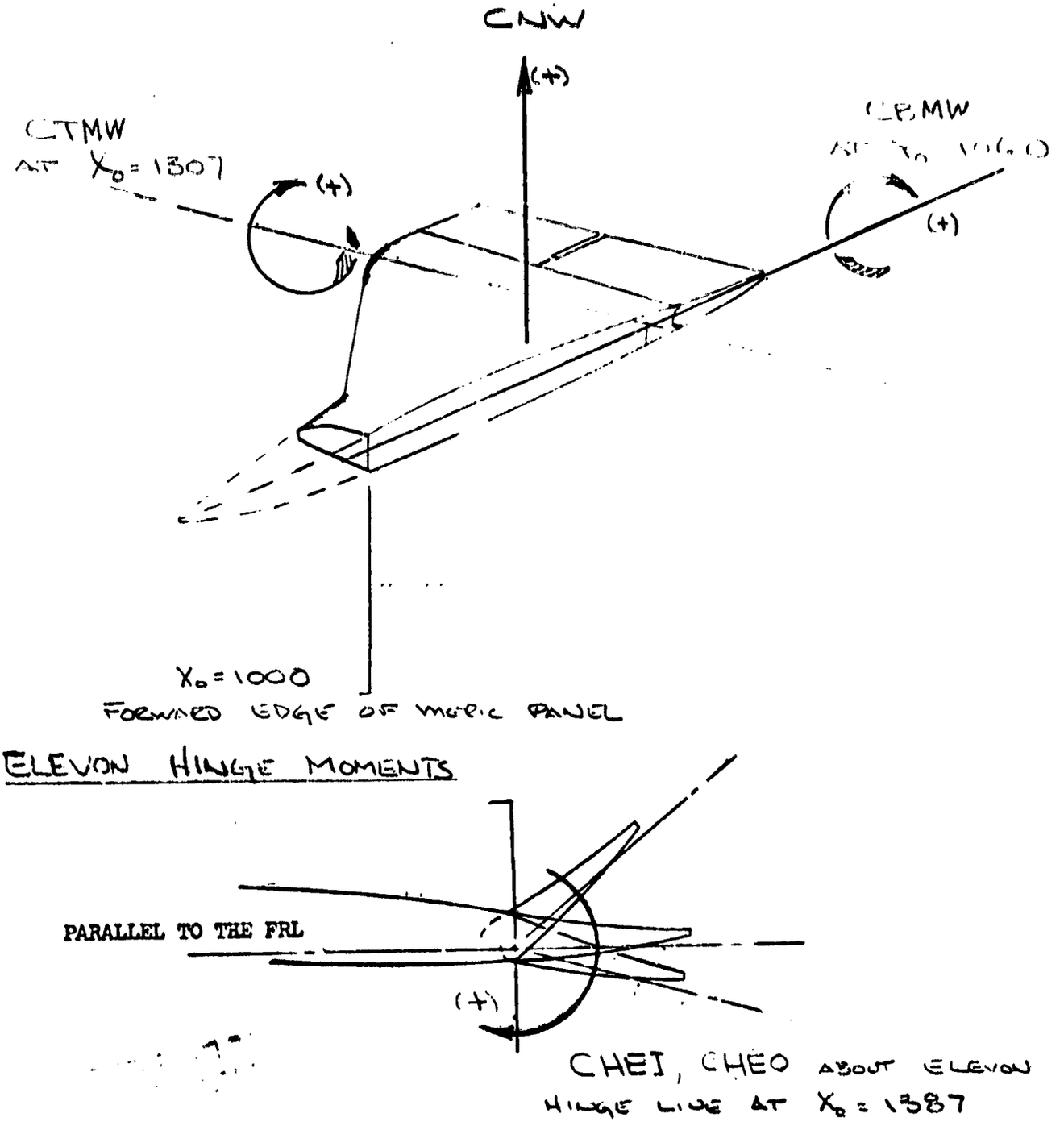


BODY FLAP DEFLECTIONS



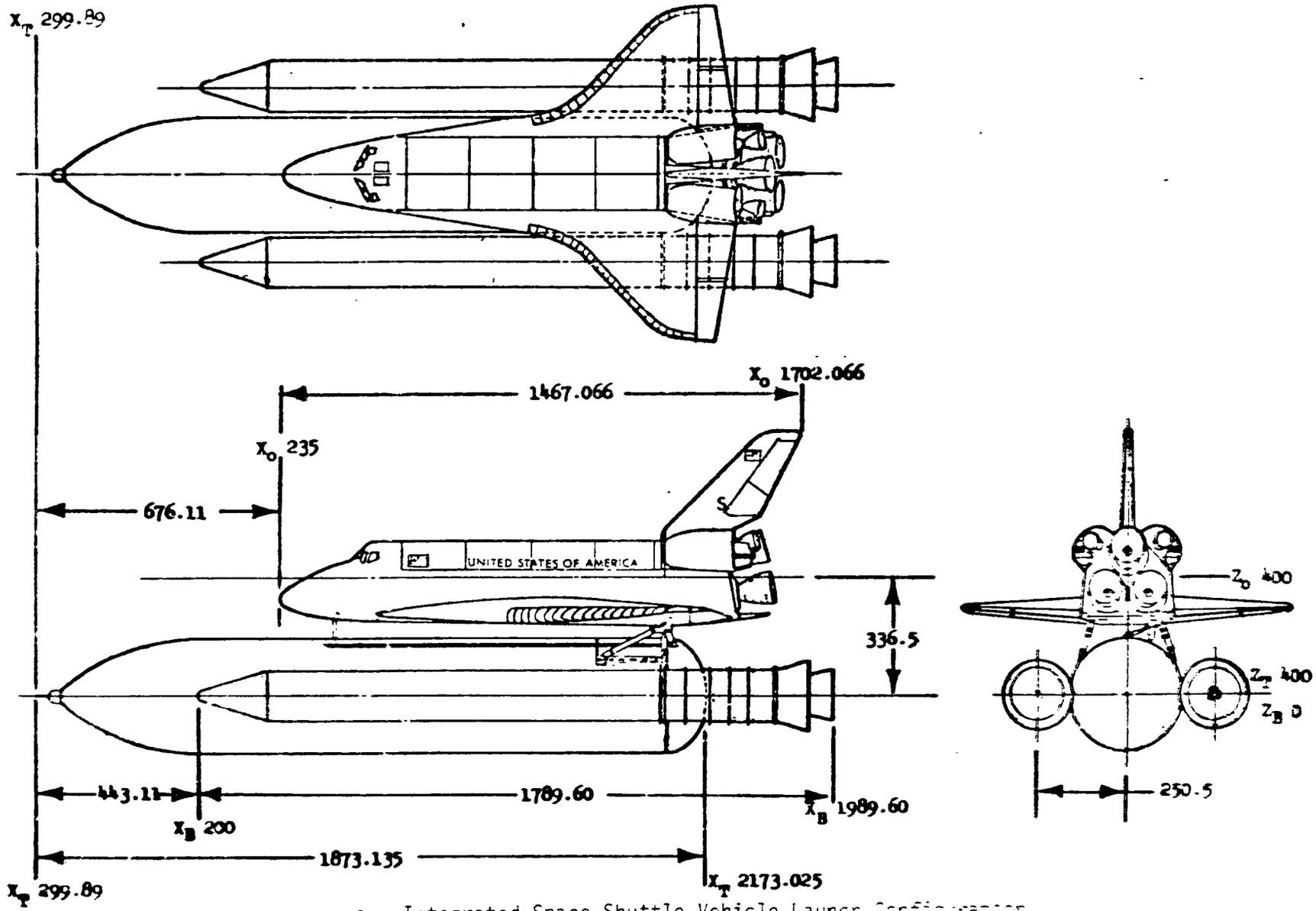
b. Control Surface deflections

Figure 1. - Continued.



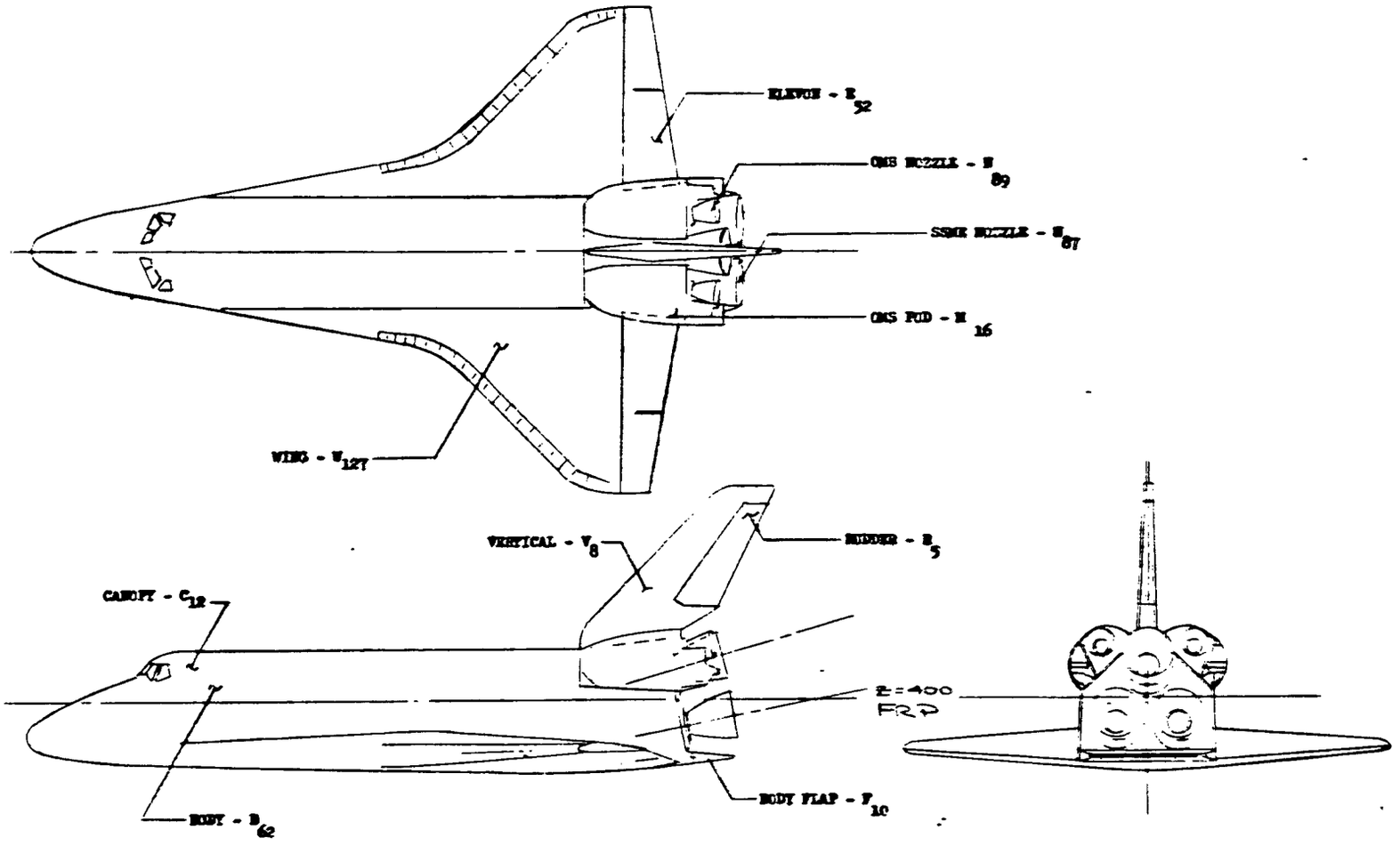
c. Panel Loads and Hinge Moments

Figure 1. - Concluded.



a. Integrated Space Shuttle Vehicle Launch Configuration

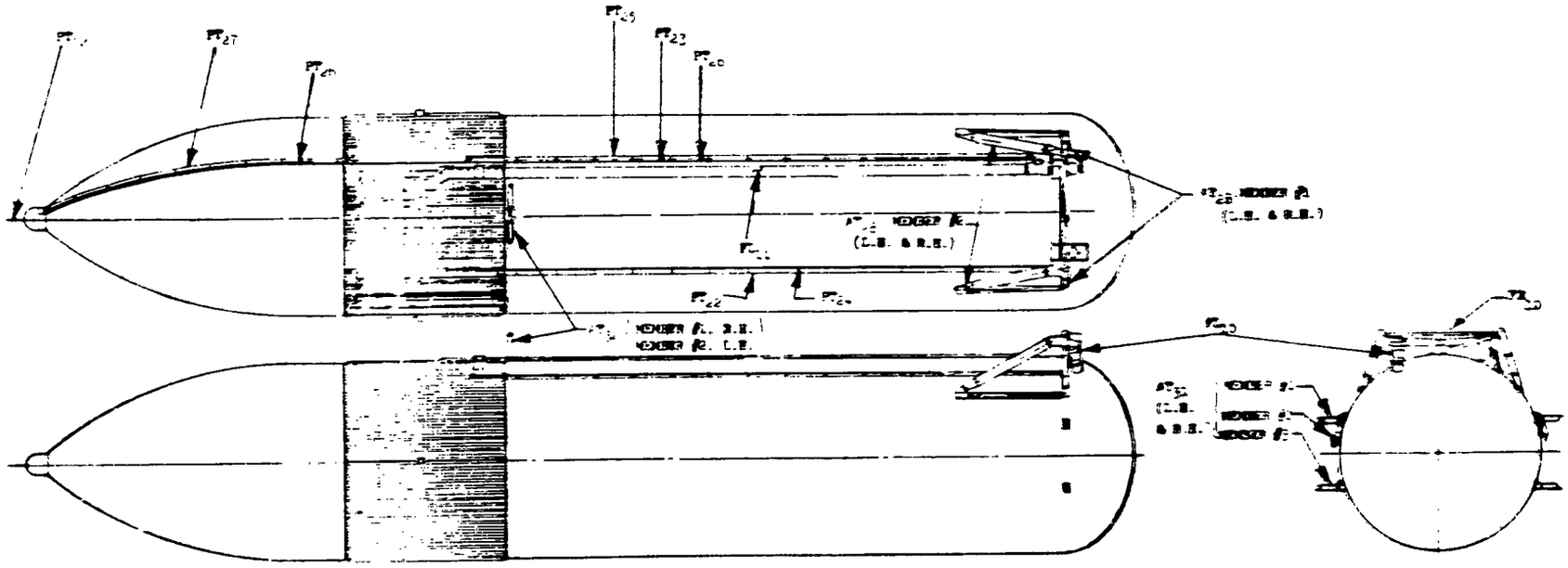
Figure 2. - Model Sketches.



Orbiter (O_1) Components

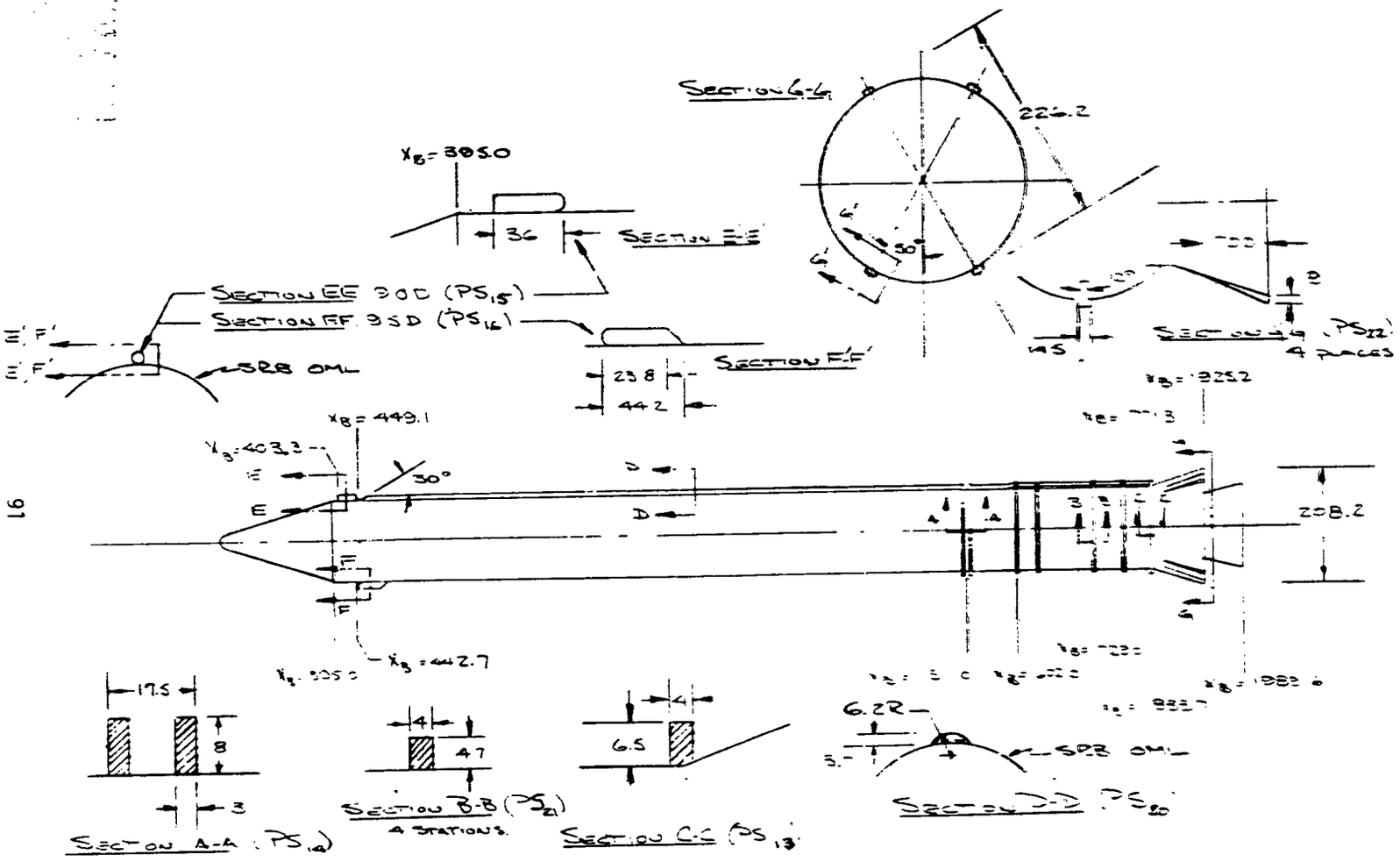
b. Orbiter (O_1) Components

Figure 2. - Continued.



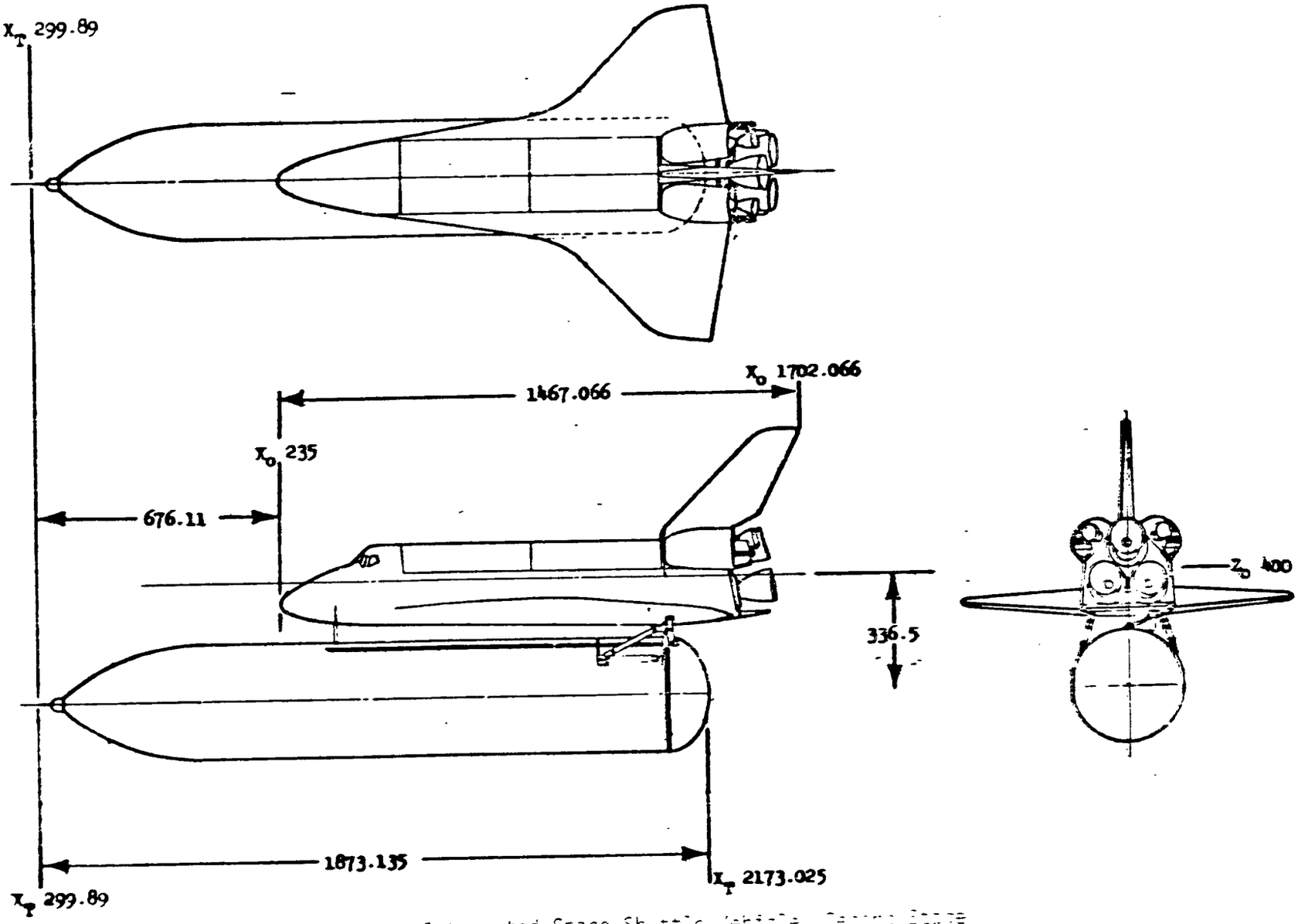
c. External Tank (T_{28}) Protuberances

Figure 2. - Continued.



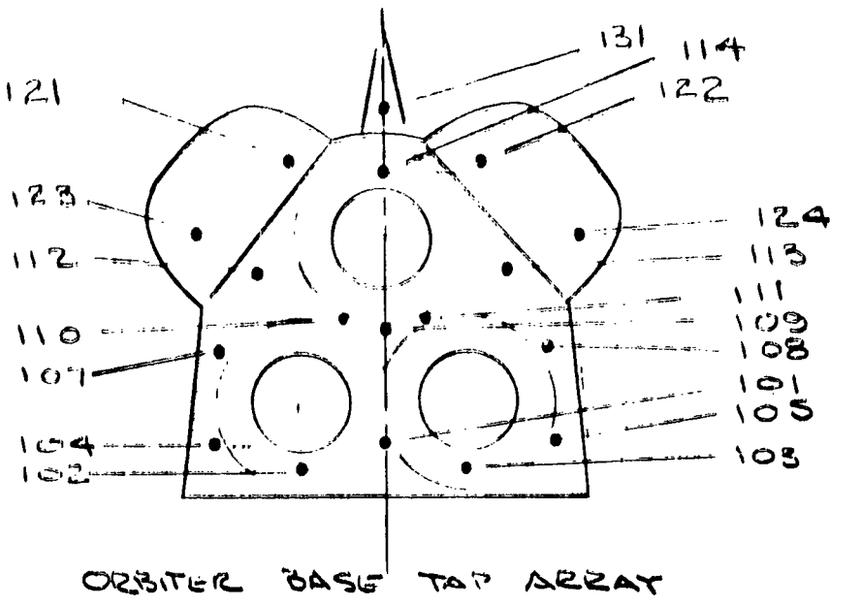
d. SRB (S_{22}) Protrusions

Figure 2. - Continued.

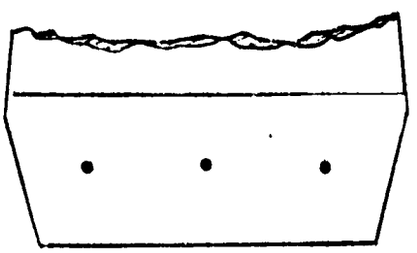


e. Integrated Space Shuttle Vehicle. Design Gage

Figure 2. - Continued.



ORBITER BASE TAP ARRAY



TOP	144	146	145
BOTTOM	141	142	143

BODY FLAP PRESSURE TAPS

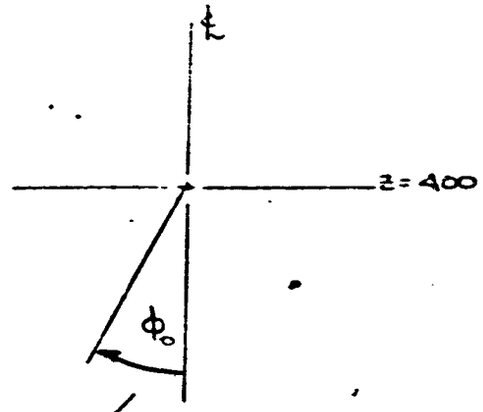
f Orbiter Base and Body Flap Pressure Tap Array
Figure 2. - Continued.

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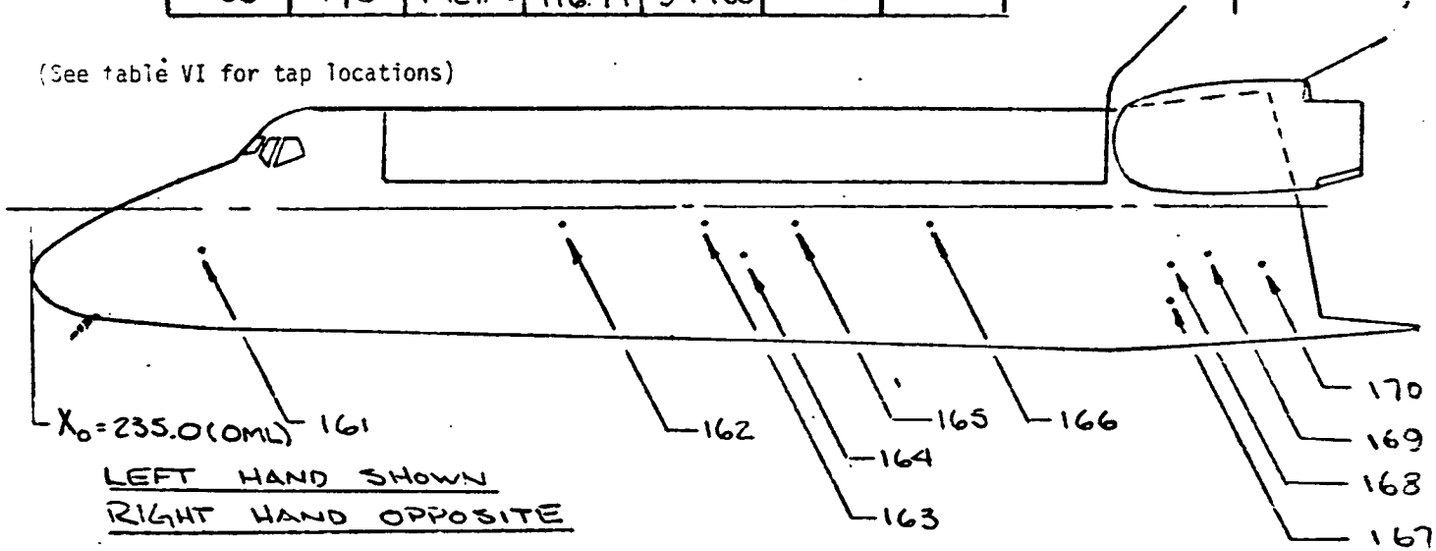
X/L MEASURED FROM [illegible]
L = 1290.3 IN FULL SCALE

TAP. NO's RH	TAP. NO's LH	Y_o Full Scale	Z_o Full Scale	X/L	ϕ_o
151	161	78.28	358.13	0.127	61.8
152	162	105.00	385.24	0.410	82.0
153	163	105.00	385.24	0.520	82.0
154	164	105.00	357.07	0.590	61.7
155	165	105.00	385.24	0.586	82.0
156	166	105.00	385.24	0.690	82.0
157	167	112.09	311.00	0.880	51.6
158	168	111.36	344.00	0.880	63.3
159	169	112.74	357.50	0.893	69.3
160	170	116.74	344.00	0.920	64.3

DEFINITION OF ϕ_o
LOOKING FWD:



(See table VI for tap locations)



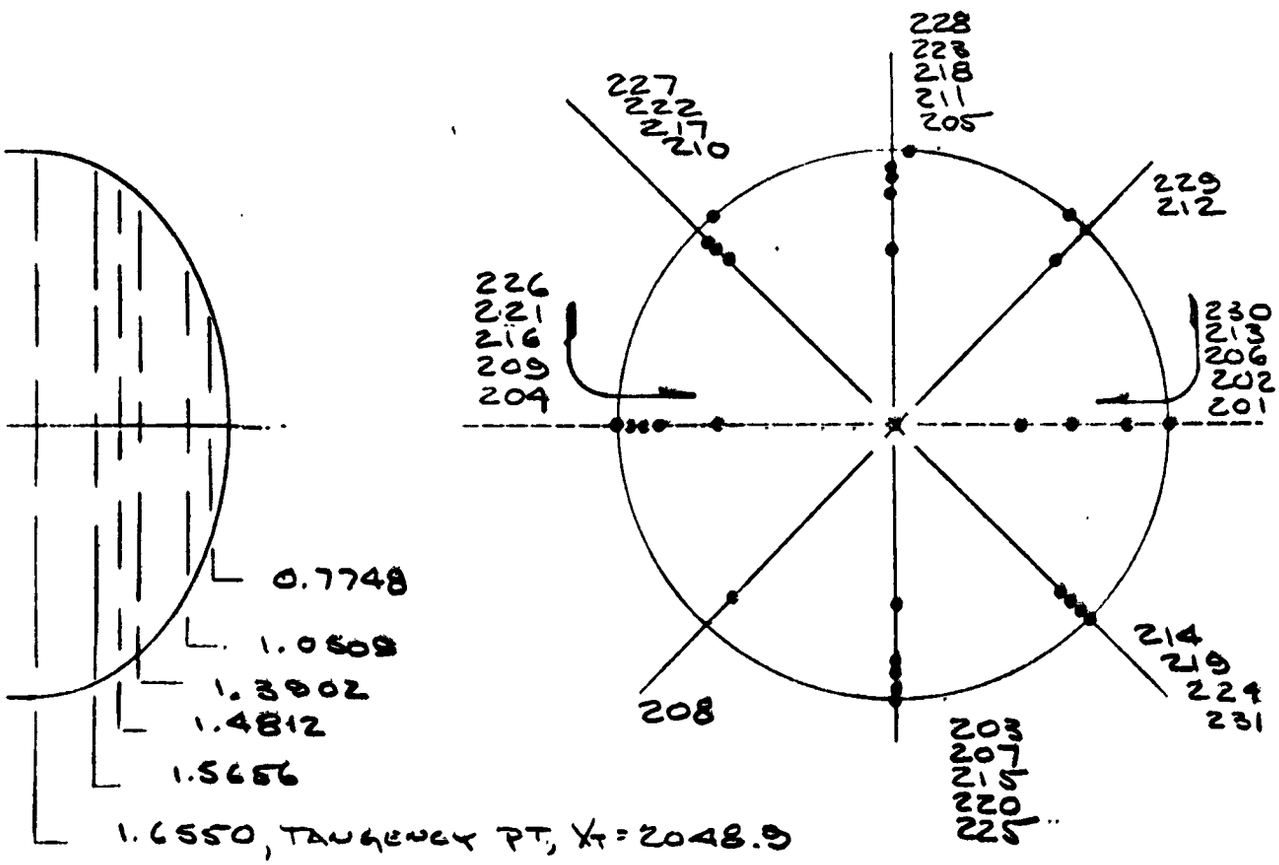
LEFT HAND SHOWN
RIGHT HAND OPPOSITE

Figure 2. - Continued.

g. Orbiter Vent Pressure Tap Array

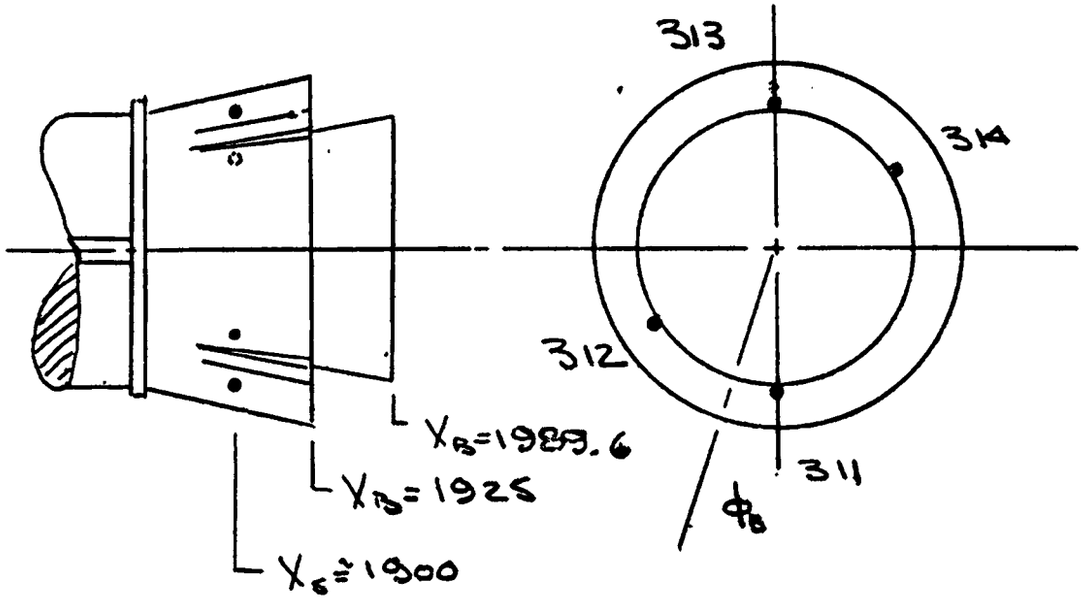
TAP NUMBER	R, IN	φ
201	0	—
202	0.7448	270
203	1.0509	0
204	↓	90
205		180
206		270
207	1.3902	0
208	↓	45
209		90
210		135
211		180
212		225
213		270
214	↓	315
215	1.4812	0
216	↓	90

TAP NUMBER	R, IN	φ
217	1.4812	135
218	↓	180
219		315
220	1.5656	0
221	↓	90
222		135
223		180
224	↓	315
225	1.6550	0
226	↓	90
227		141
228		186
229		219
230		270
231	↓	315



h. ET Base Pressure Tap Array

Figure 2. - Continued.



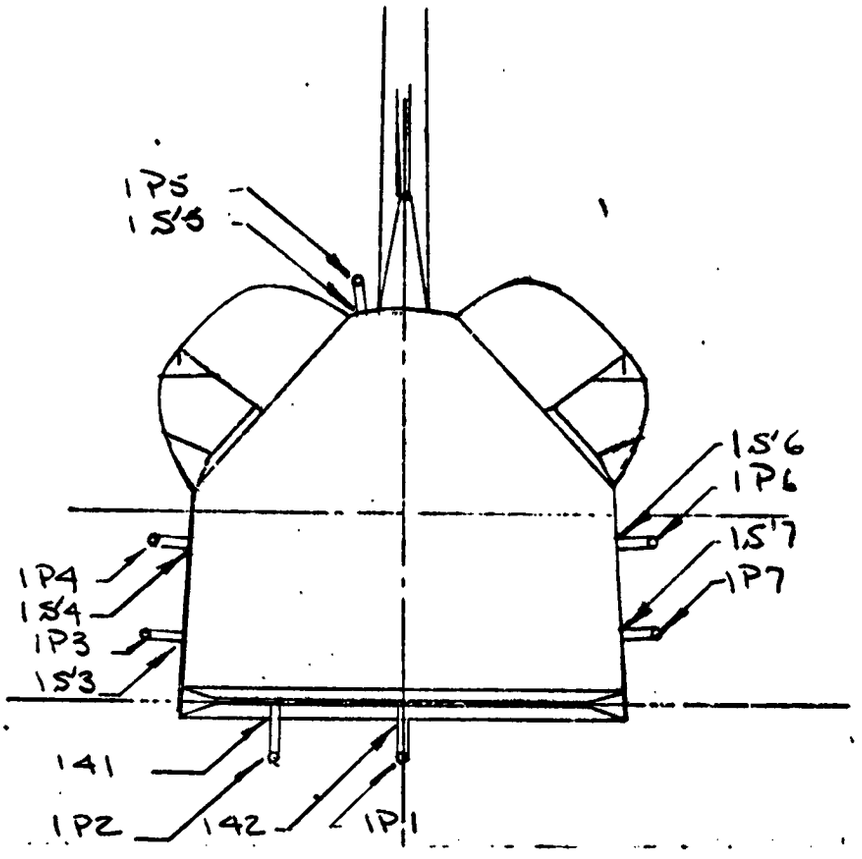
LEFT HAND SHOWN

TAPS ARE FREE STANDING INSIDE SKIRT

TAP NO's		X_B		R.H. ϕ_B	L.H ϕ_B
RH	LH				
301	311	1900		0°	0°
302	312	↓		120	60
303	313			180	180
304	314			300	240

i. SRM Base Pressure Tap Array

Figure 2. - Continued.



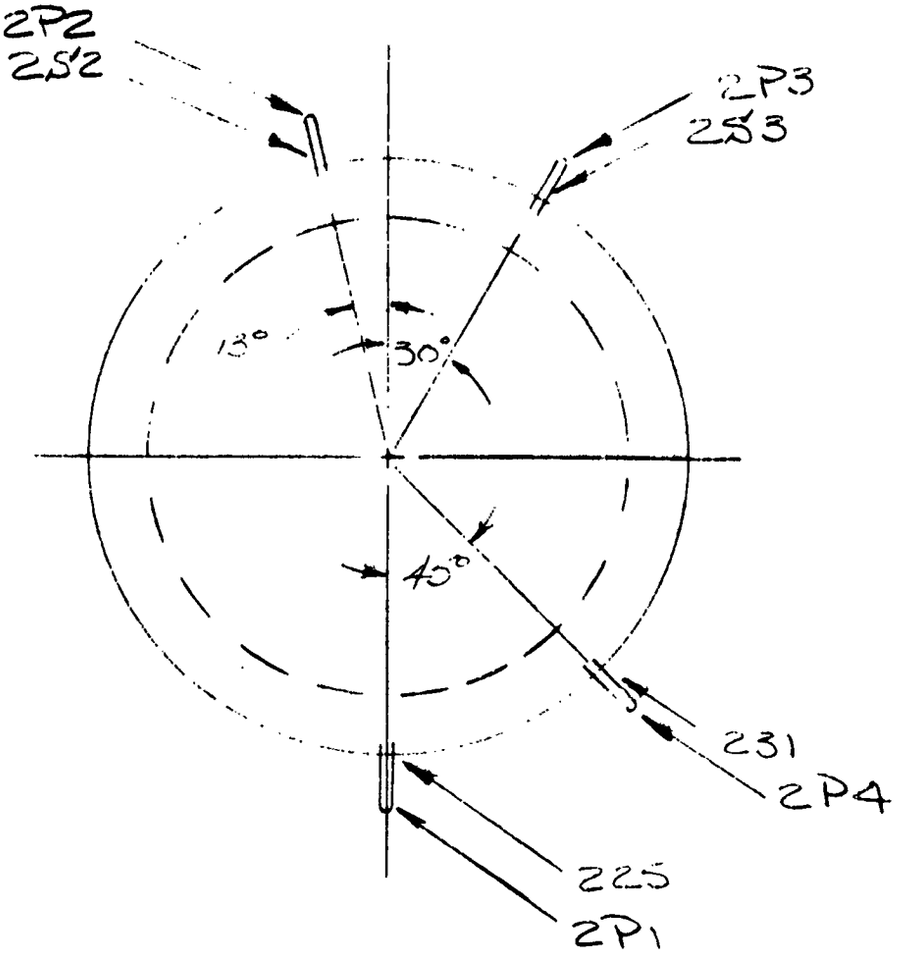
Pitot #	Static #	X_o	Y_o	Z_o
1P1	142	1565.0	0	
1P2	141	1568.0	-75.0	
1P3	1S'3	1484.4		330.0
1P4	1S'4	1474.9		385.0
1P5	1S'5	1441.0	-25.0	
1P6	1S'6	1474.9		385.0
1P7	1S'7	1484.4		330.0

- PITOT TAPS ARE 0.25 FROM LOCAL SURFACE & STATIC

j. Orbiter Mach Rakes

Figure 2. - Continued.

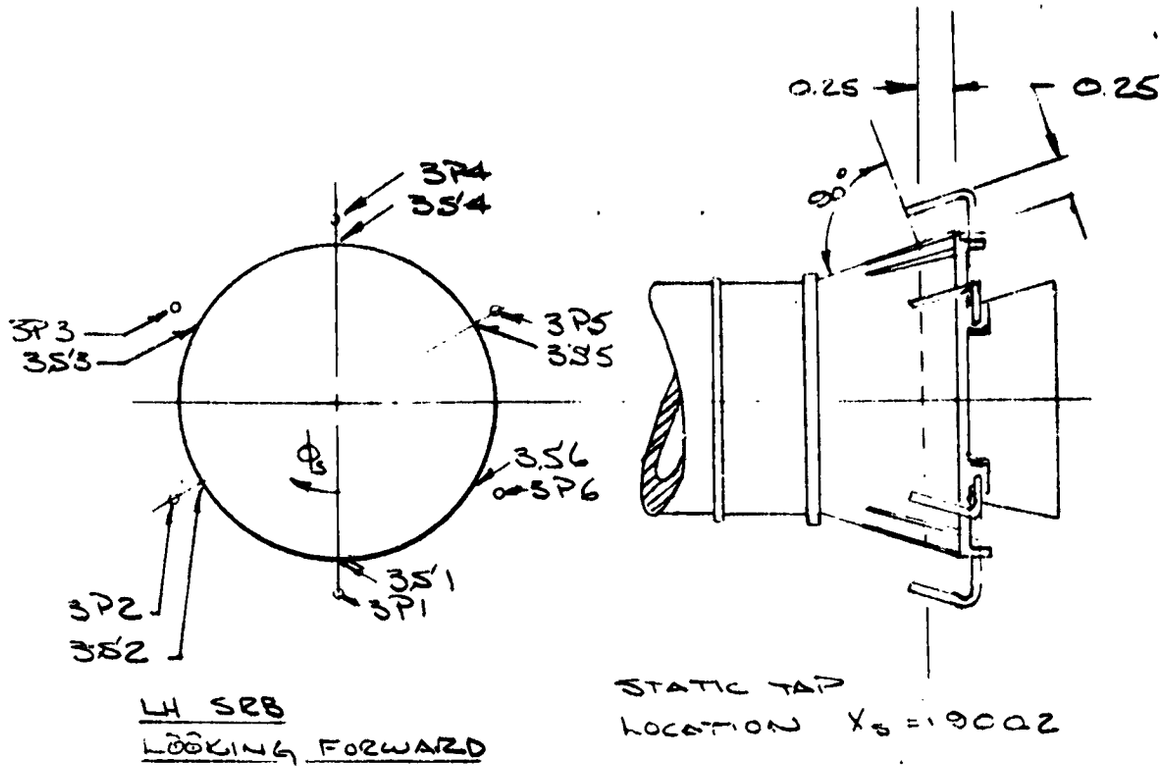
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STATION, X_T	PITOT TAP	STATIC TAP	ϕ_T
2048.0	2P1	225	0
↓	2P2	252	167°
	2P3	253	210°
	2P4	231	315°

k. External Tank Mach Rakes

Figure 2. - Continued.



PITOT #	X_s *	STATIC #	X_s	ϕ_s
3P1	1892.2	3S1	1900.2	0°
3P2	↓	3S2	↓	60
3P3		3S3		120
3P4		3S4		180
3P5		3S5		240
3P6		3S6		300

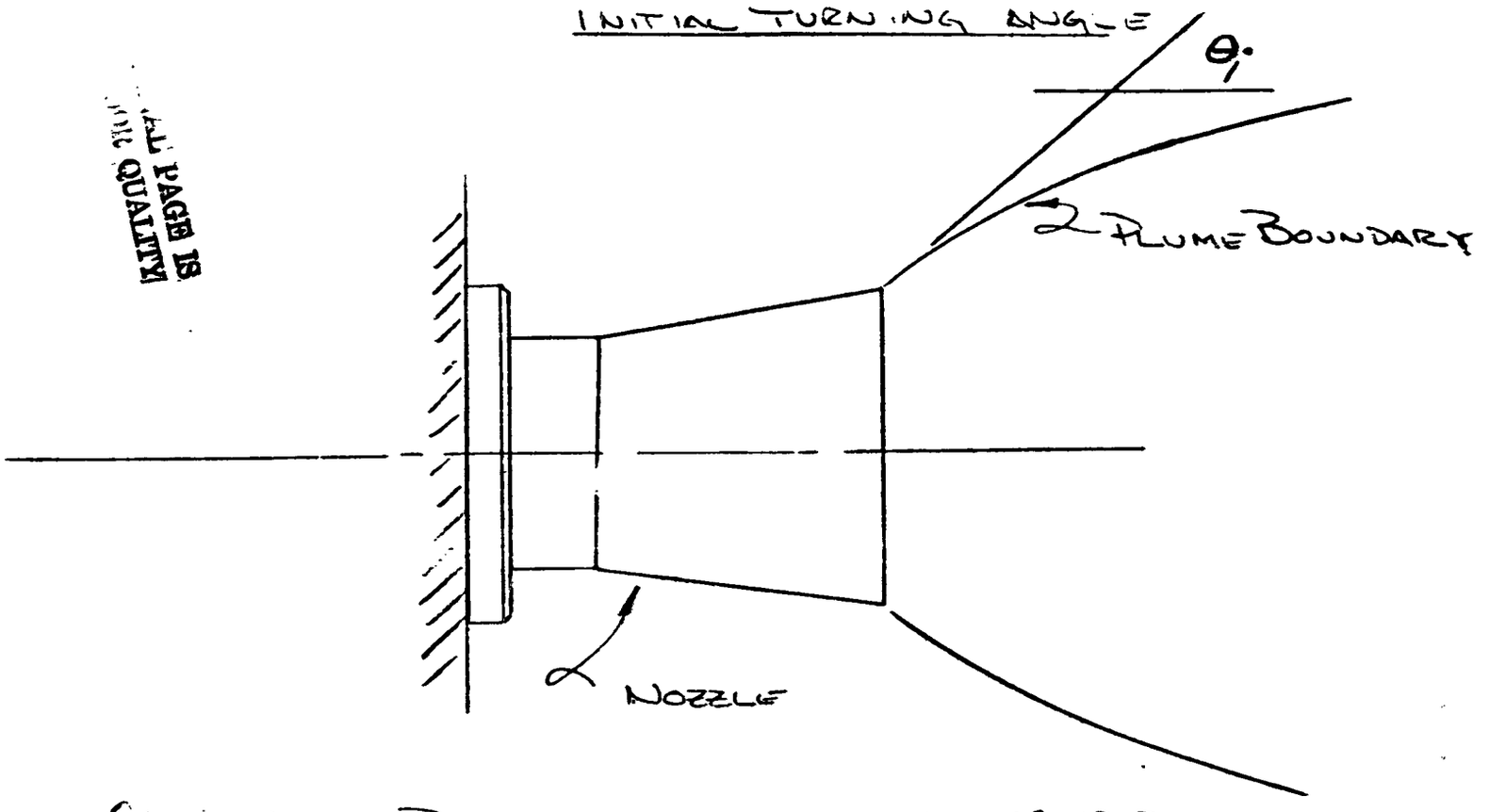
* LOCATION is ⊥ TO STATIC TAP.

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1. SRB Mach Ratios

Figure 7. - Continued.

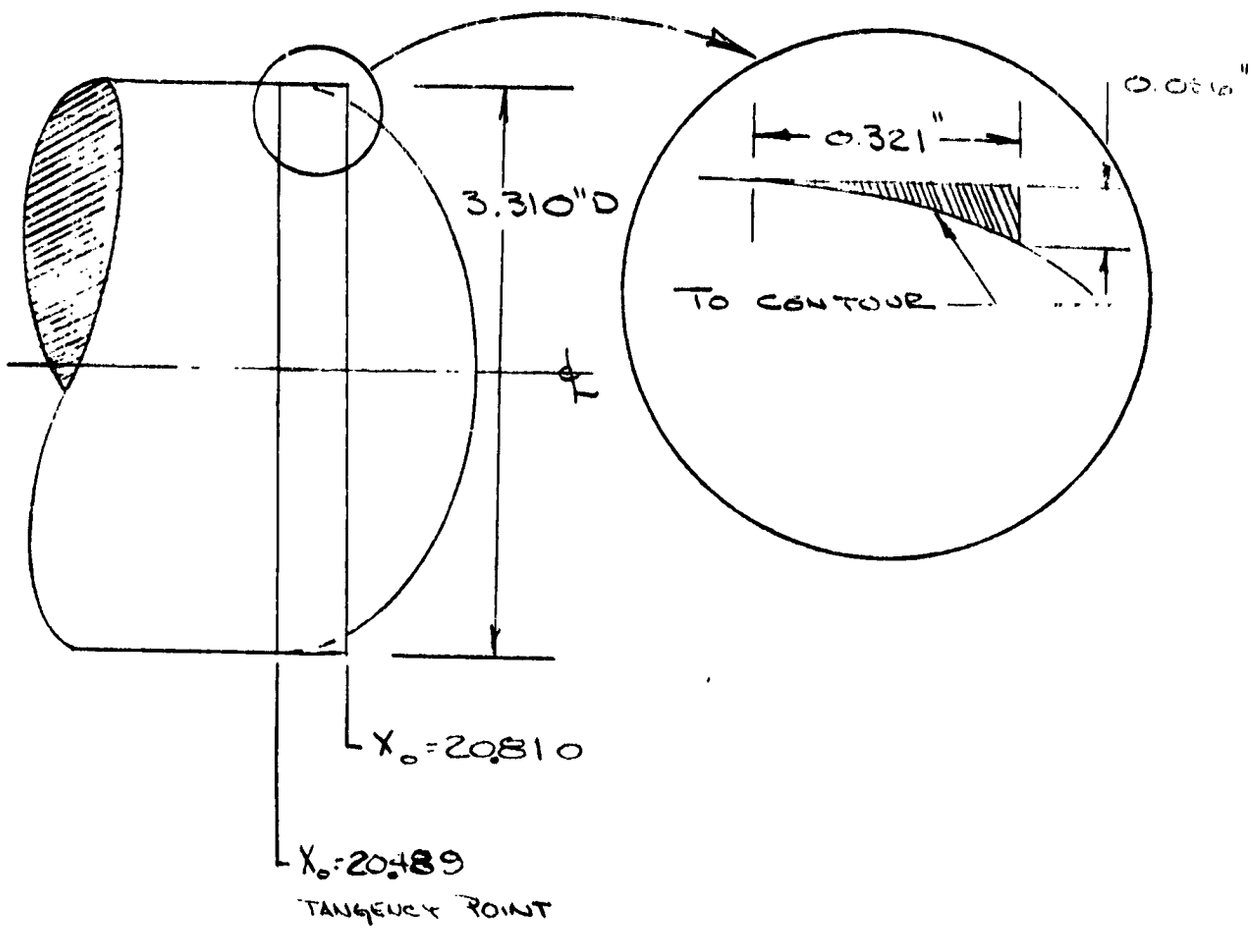
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θ_i IS THE PLUME EXIT ANGLE MEASURED RELATIVE TO THE NOZZLE CENTERLINE. NOMINAL IS INDICATIVE OF THE PROTOTYPE PLUME SHAPE AND INITIAL TURNING ANGLE; LESS THAN NOMINAL INDICATES A SMALLER AND GREATER THAN NOMINAL A LARGER THAN PROTOTYPE PLUME.

m. Definition of θ_i

Figure 2. - Continued.

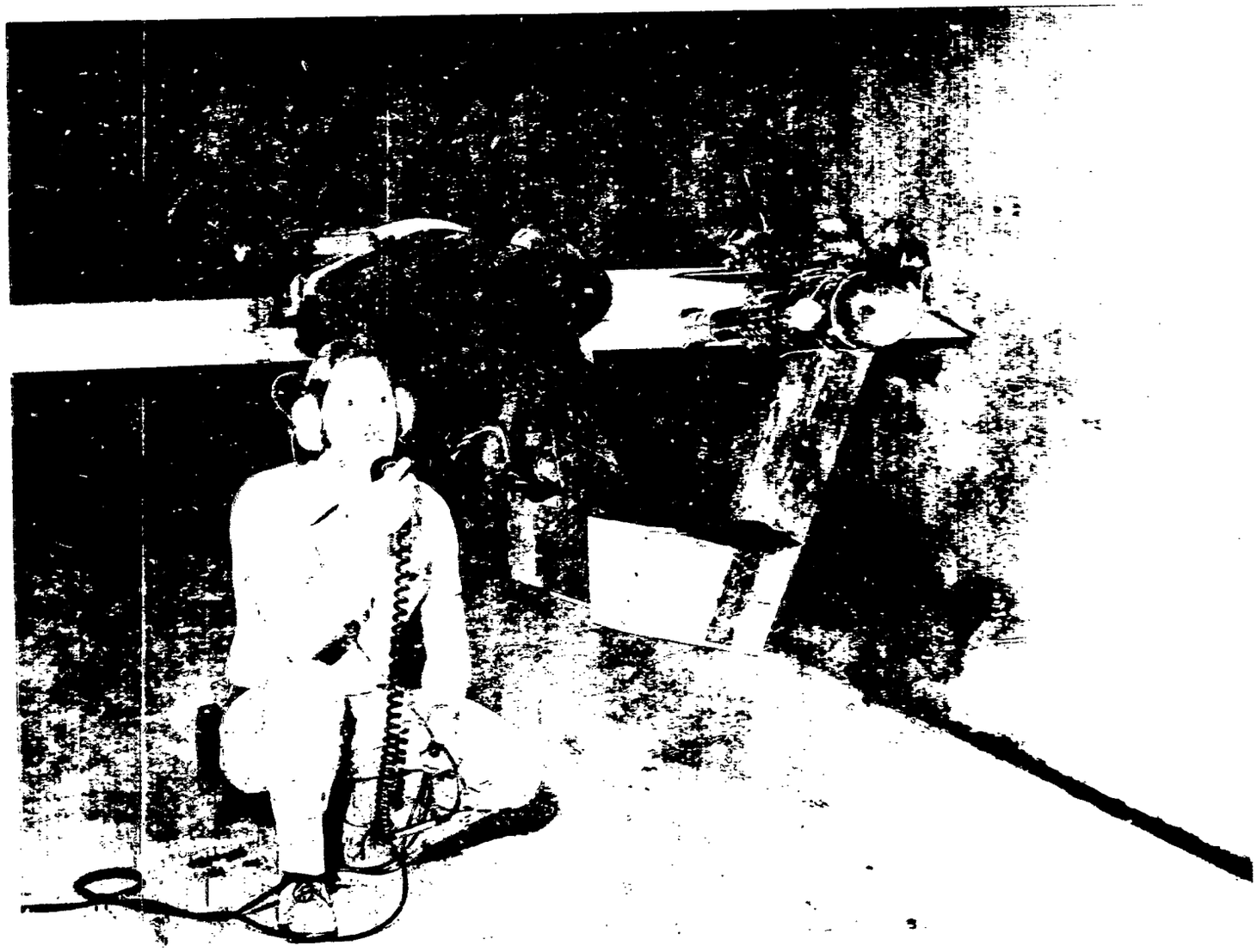


- ALL DIMENTIONS MODEL SCALE
- RING IS INTENDED TO LOWER $\overline{D}$ RING BY FIXING TRANSITION

n. Drag Ring, $\overline{D}_{RING}$

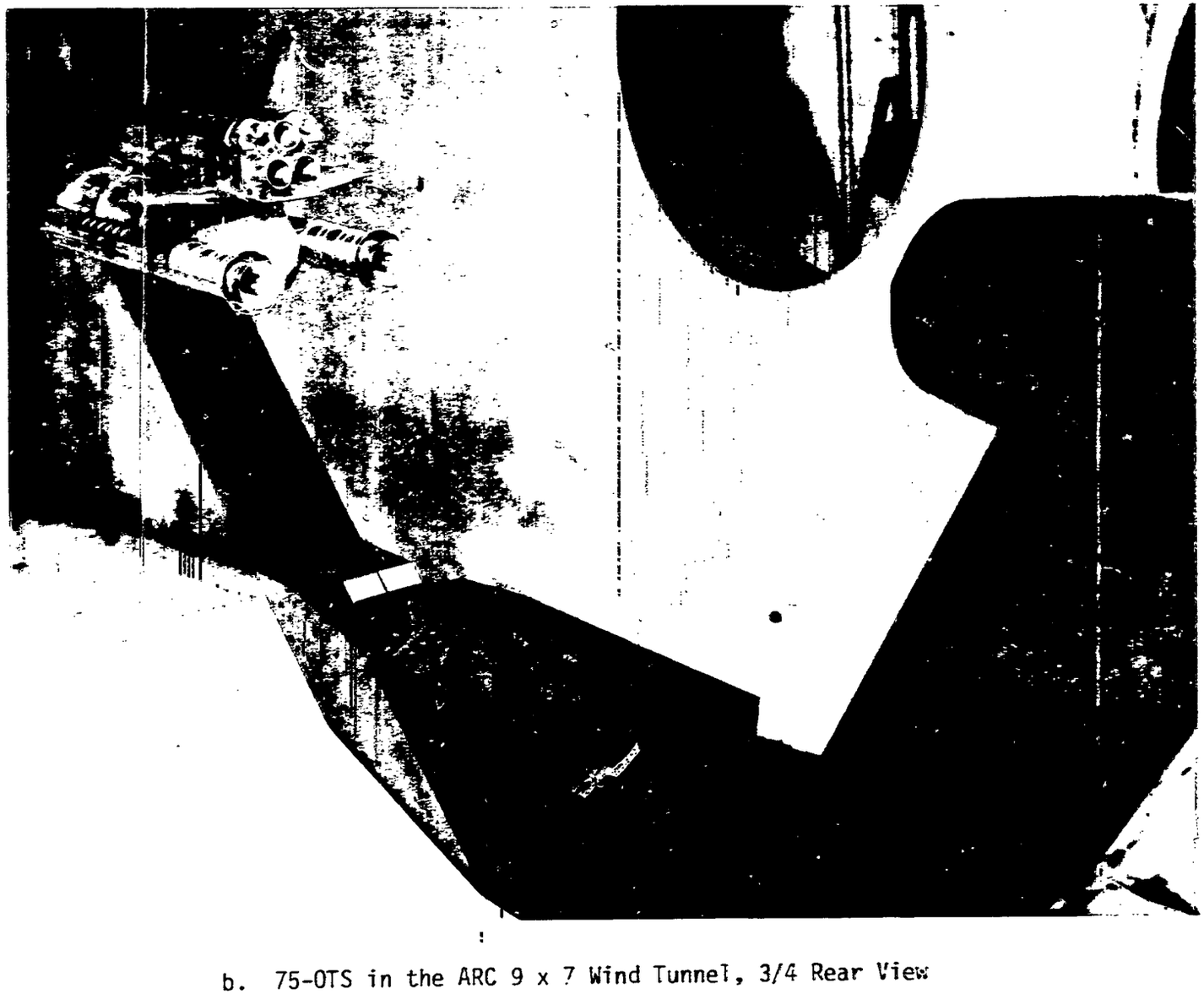
Figure 2. - Concluded.

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a. 75-OTS in the ARC 9 x 7 Wind Tunnel, 3/4 Front View

Figure 3. - Model photographs.



b. 75-OTS in the ARC 9 x 7 Wind Tunnel, 3/4 Rear View

Figure 3. - Concluded.

DATA

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	RE	REFERENCE INFORMATION		
(RE6*23)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	23.000	S/REF	2690.0000	SQ.FT.
(RE6*30)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.000	B/REF	1490.0000	IN.
(RE6*23)		ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	1.550	23.000	C/REF	1490.0000	IN.
(RE6*30)		ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	1.550	30.000	X/REF	875.0000	IN.
(RE6*23)		ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	1.550	23.000	Z/REF	400.0000	IN.
								SCALE	.0100	

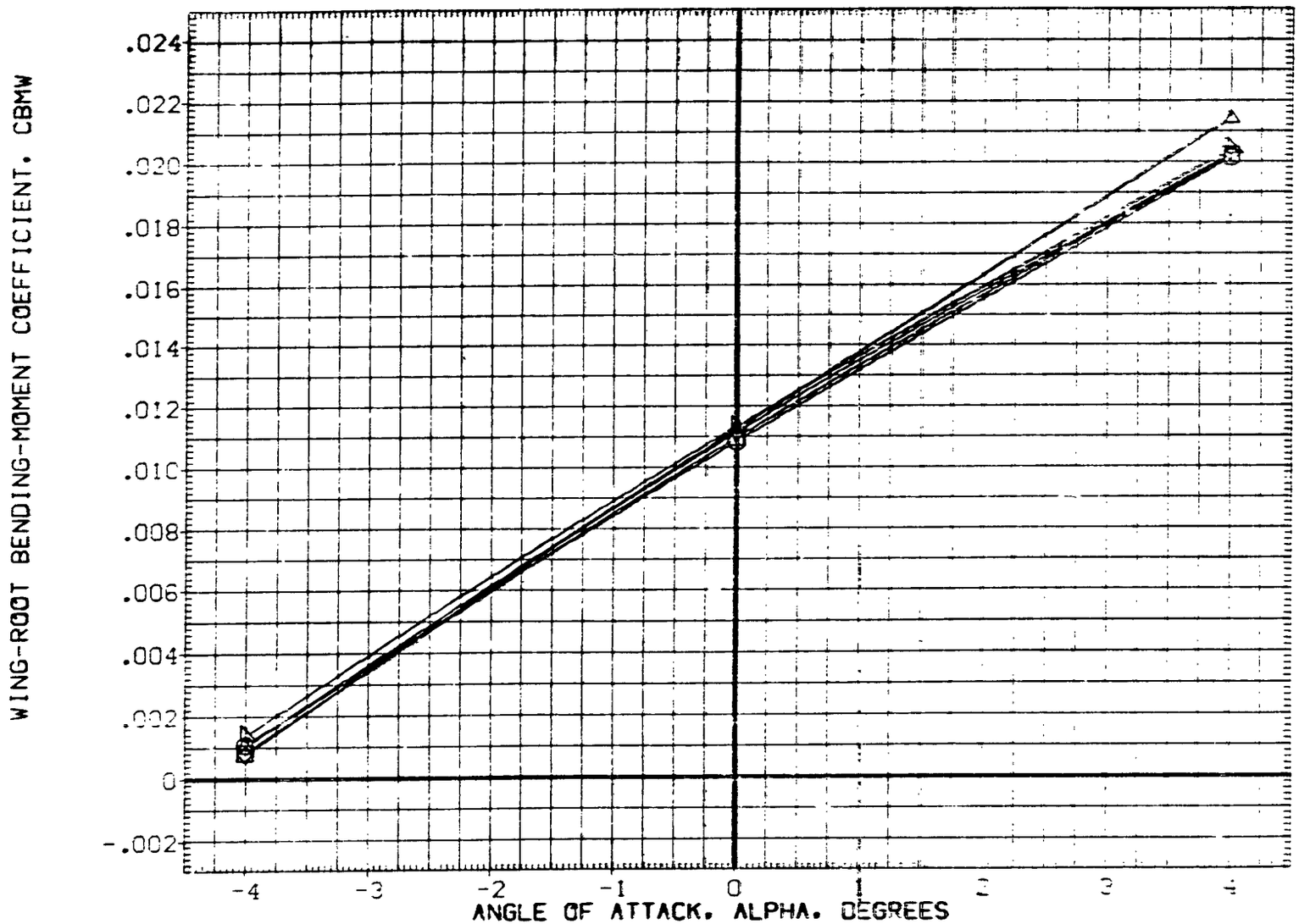


FIG.4 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 1.55

(A)BETA = .00

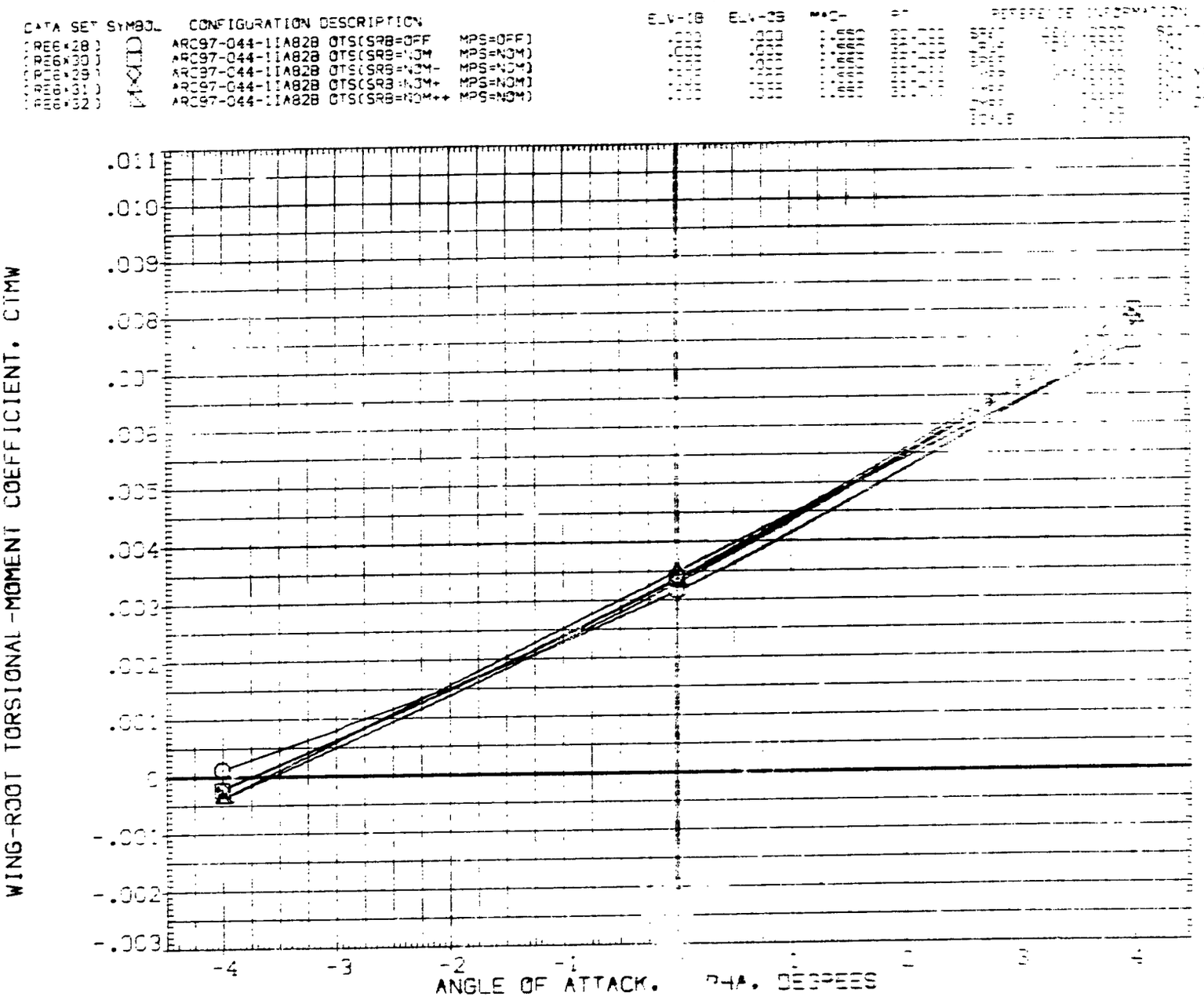


FIG.4 SRB PLUME SIZE EFFECT ON WING LOADS - PITCH, MACH = 1.55

CA:BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	ALT
(REF=28)		ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(REF=30)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(REF=29)		ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	1.550	30.700
(REF=31)		ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	1.550	30.700
(REF=32)		ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT.
YMRP	.0000	IN. YT.
ZMRP	400.0000	IN. ZT.
SCALE	.0100	

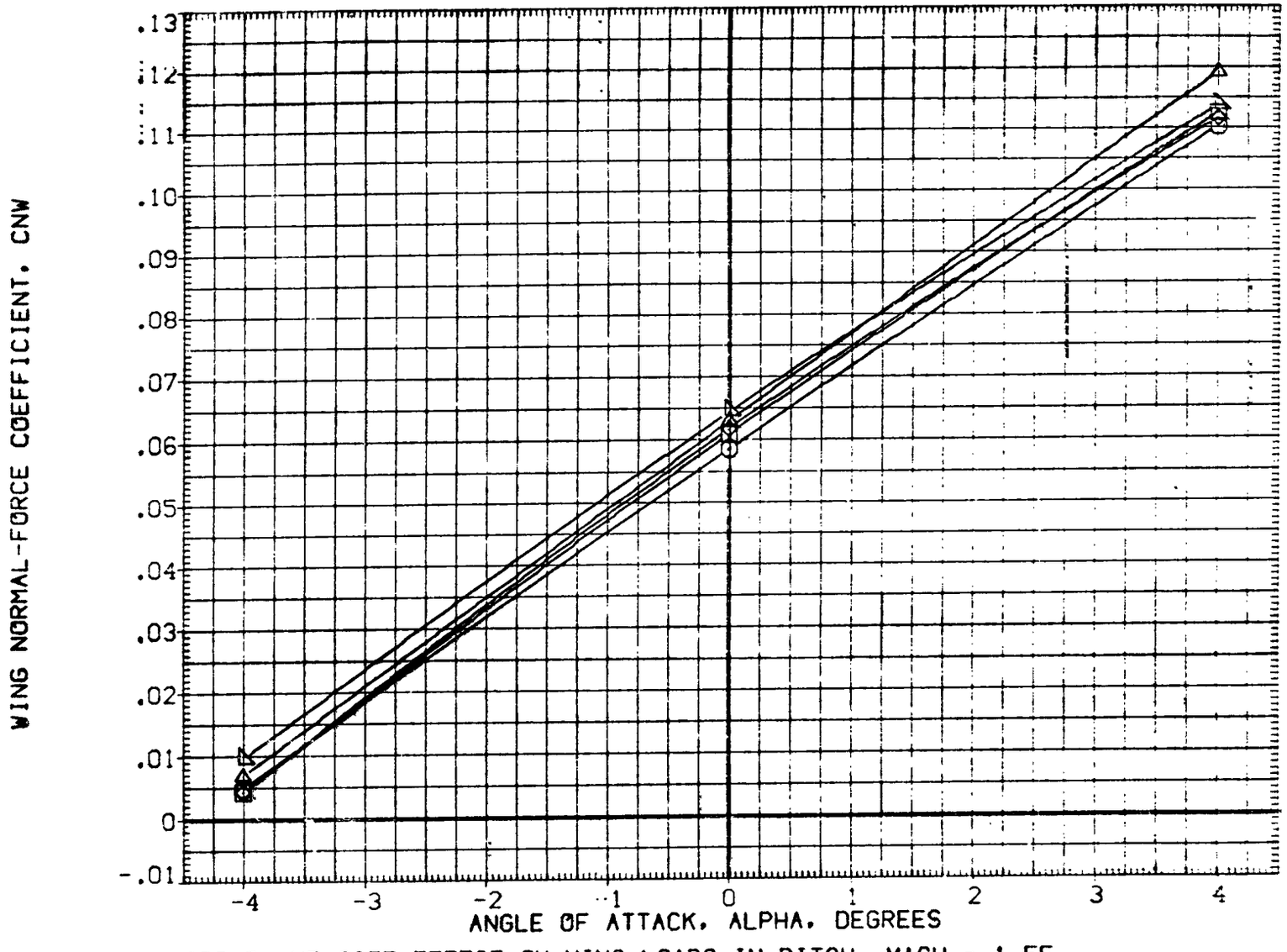


FIG.4 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X28)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(RE6X30)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700
(RE6X29)		ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	1.550	30.700
(RE6X31)		ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	1.550	30.700
(RE6X32)		ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	979.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

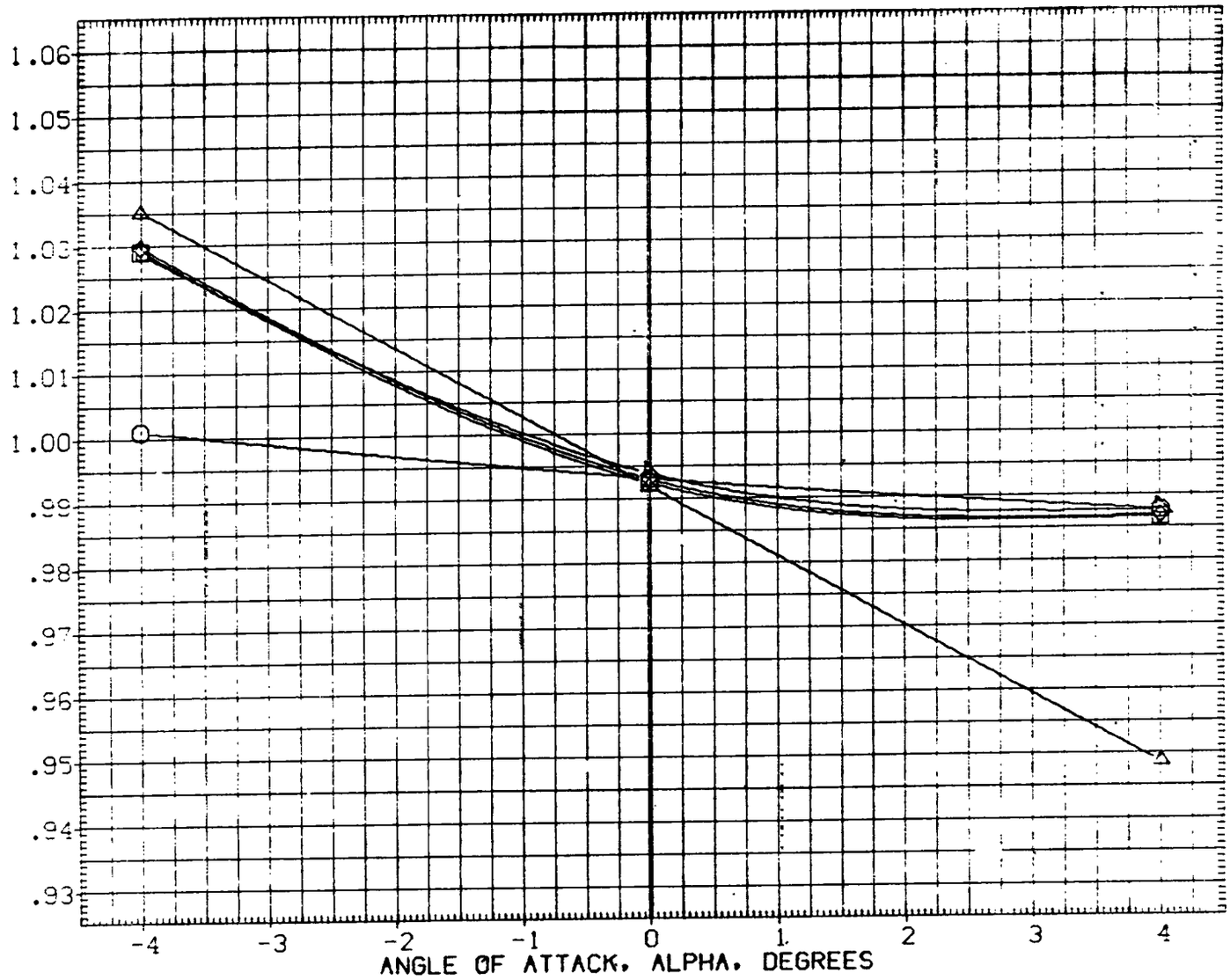


FIG.4 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6\28)	□	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RE6\30)	△	ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6\29)	◇	ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	1.550	30.700
(RE6\31)	▽	ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	1.550	30.700
(RE6\32)	◁	ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

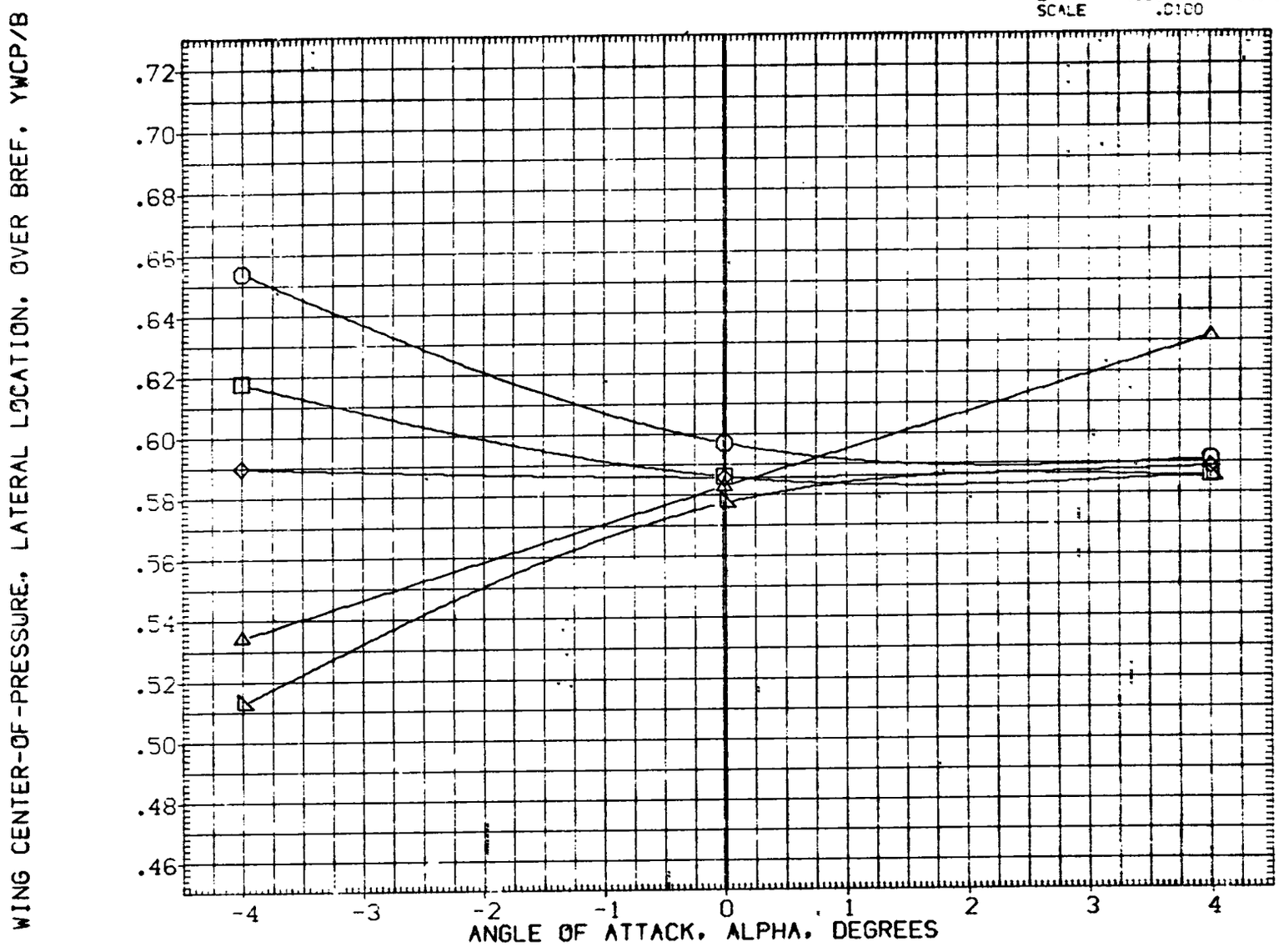


FIG.4 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X35)	□	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)	◇	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(RE6X36)	△	ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	2.000	30.700
(RE6X38)	▽	ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	2.000	30.700
(RE6X39)	⊲	ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

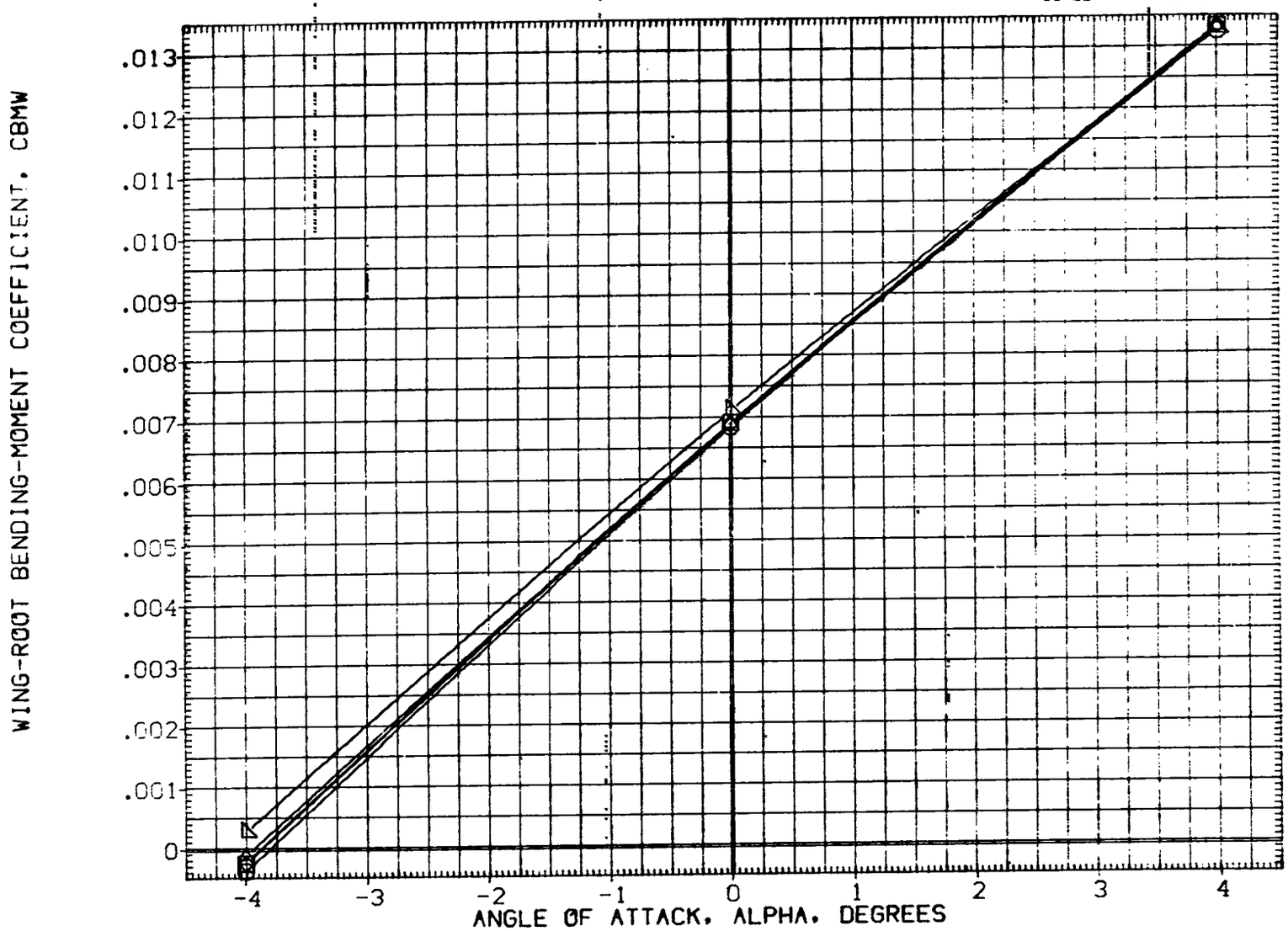


FIG.5 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X35)	□	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)	○	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(RE6X36)	△	ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	2.000	30.700
(RE6X38)	▽	ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	2.000	30.700
(RE6X39)	◇	ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1280.3000	
BREF	1280.3000	
XMRP	976.1000	XT
YMRP	.0000	YT
ZMRP	400.0000	ZT
SCALE	1.0000	

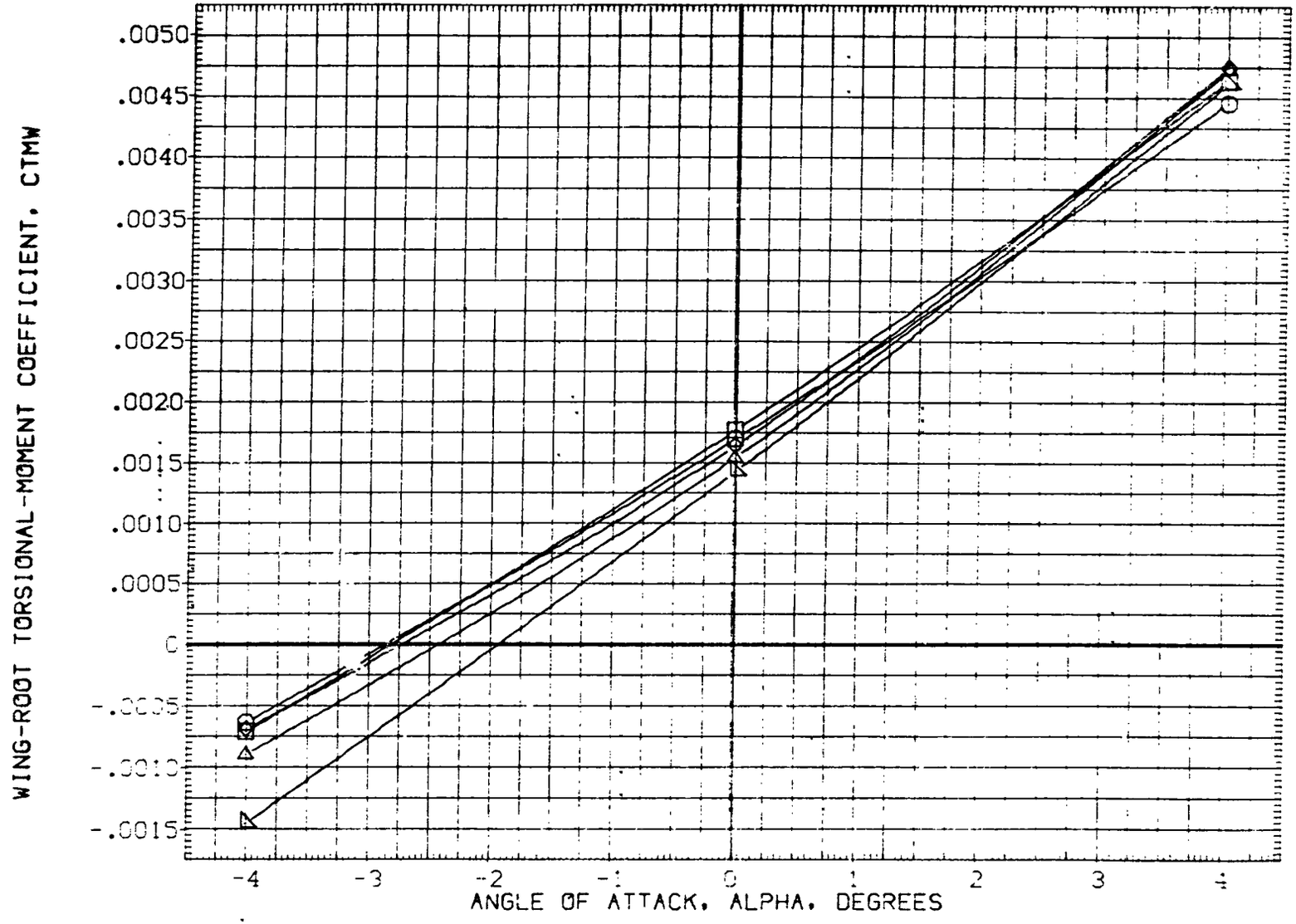


FIG.5 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)		ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X36)		ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.000	30.700
(RE6X38)		ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.000	30.700
(RE6X39)		ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1390.0000	IN.
BREF	1265.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	400.0000	IN. Z
SCALE	.0100	

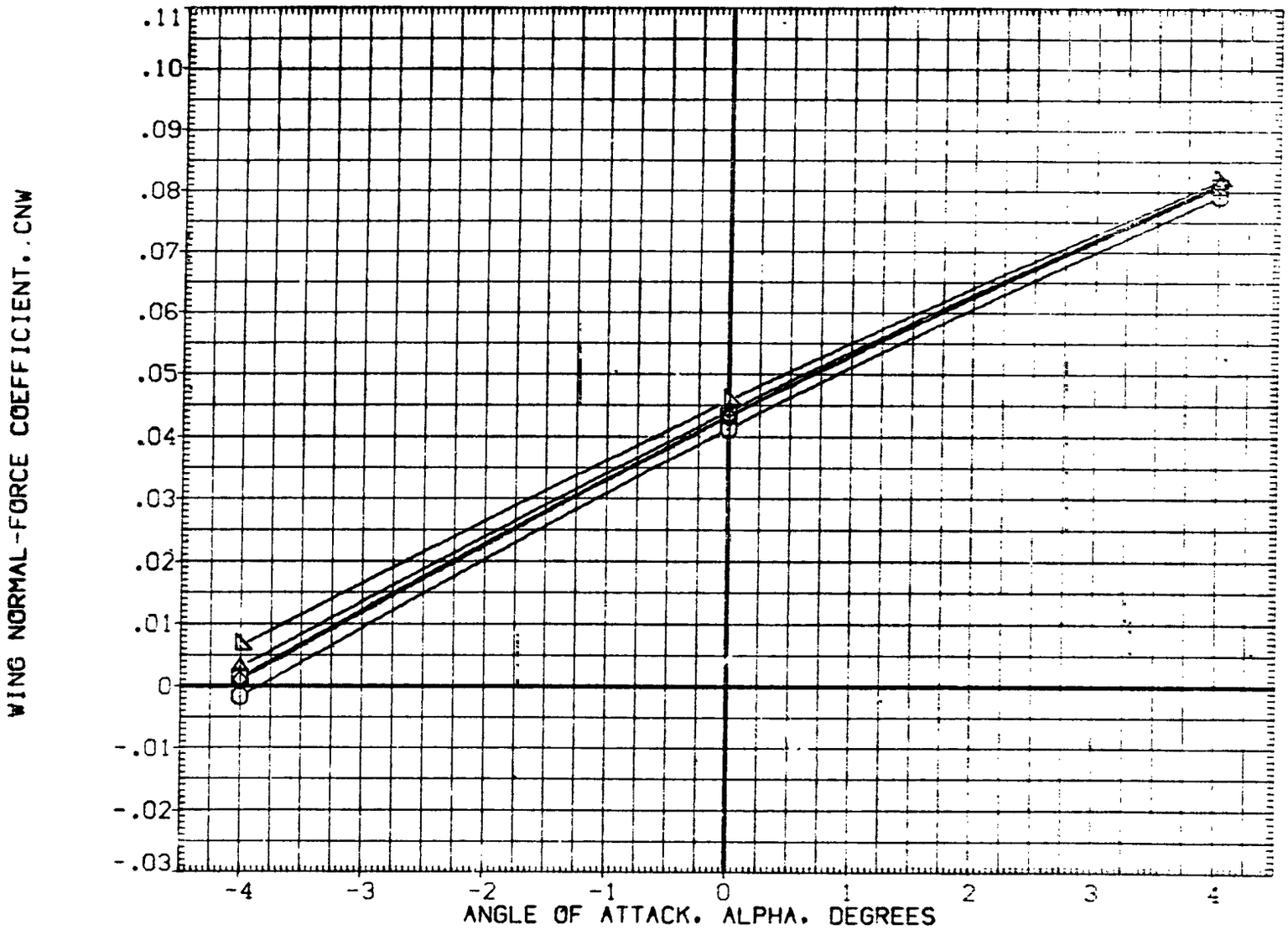


FIG.5 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X35)	○	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)	△	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(RE6X36)	◇	ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	2.000	30.700
(RE6X39)	□	ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	2.000	30.700
(RE6X38)	⊠	ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT.
SCALE	.0100	

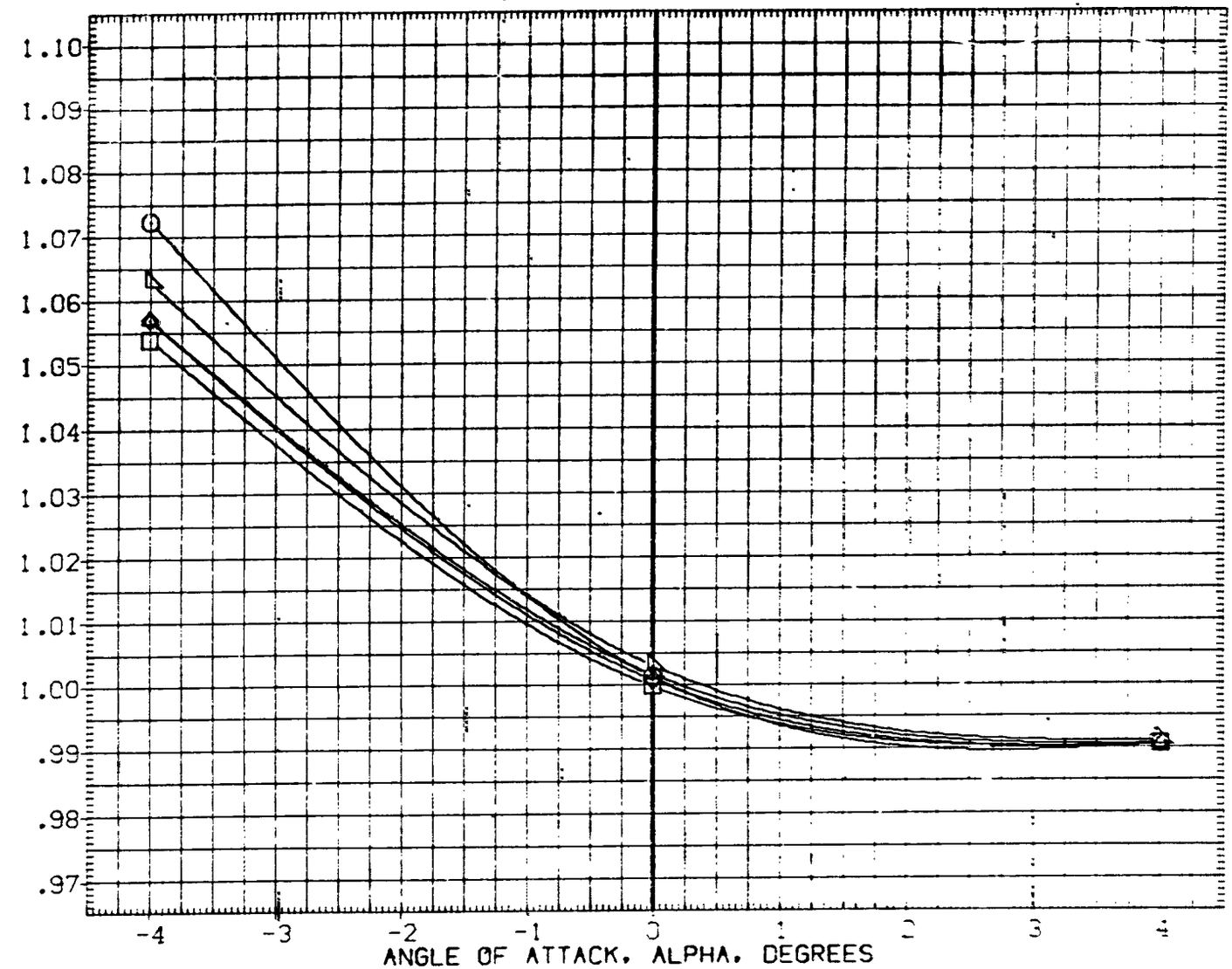


FIG.5 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)		ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X36)		ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.000	30.700
(RE6X38)		ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.000	30.700
(RE6X39)		ARC97-044-1 2B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1090.0000	IN.
BREF	1[illegible].0000	IN.
XMRP	9[illegible].0000	IN. XT
YMRP	[illegible].0000	IN. YT
ZMRP	4[illegible].0000	IN. ZT
SCALE	.0100	

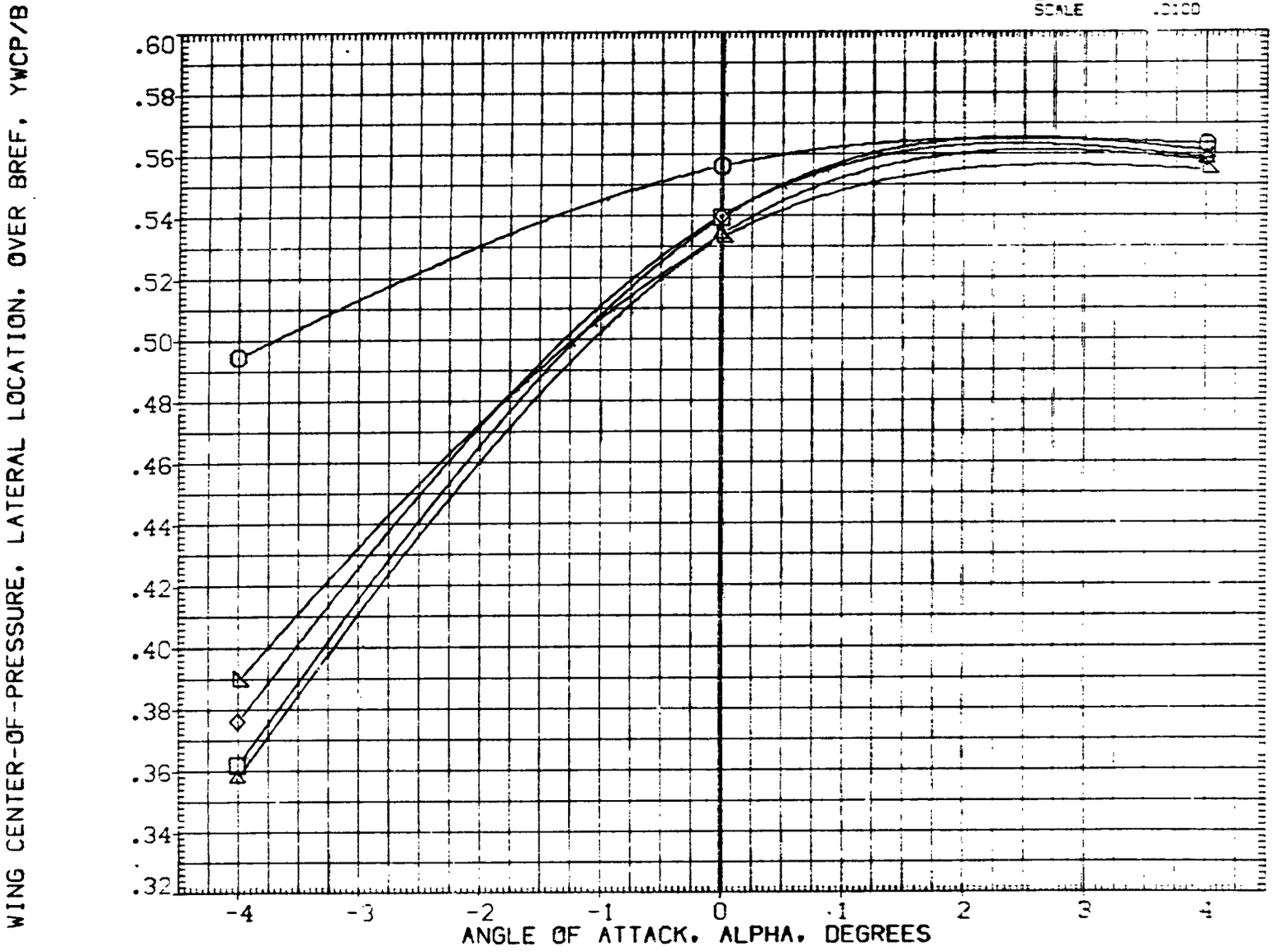


FIG.5 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6x42)		ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6x44)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6x43)		ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700
(RE6x45)		ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700
(RE6x46)		ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.8000	IN.
BREF	1290.8000	IN.
XMRP	998.0000	IN. XT
YMRP	0.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

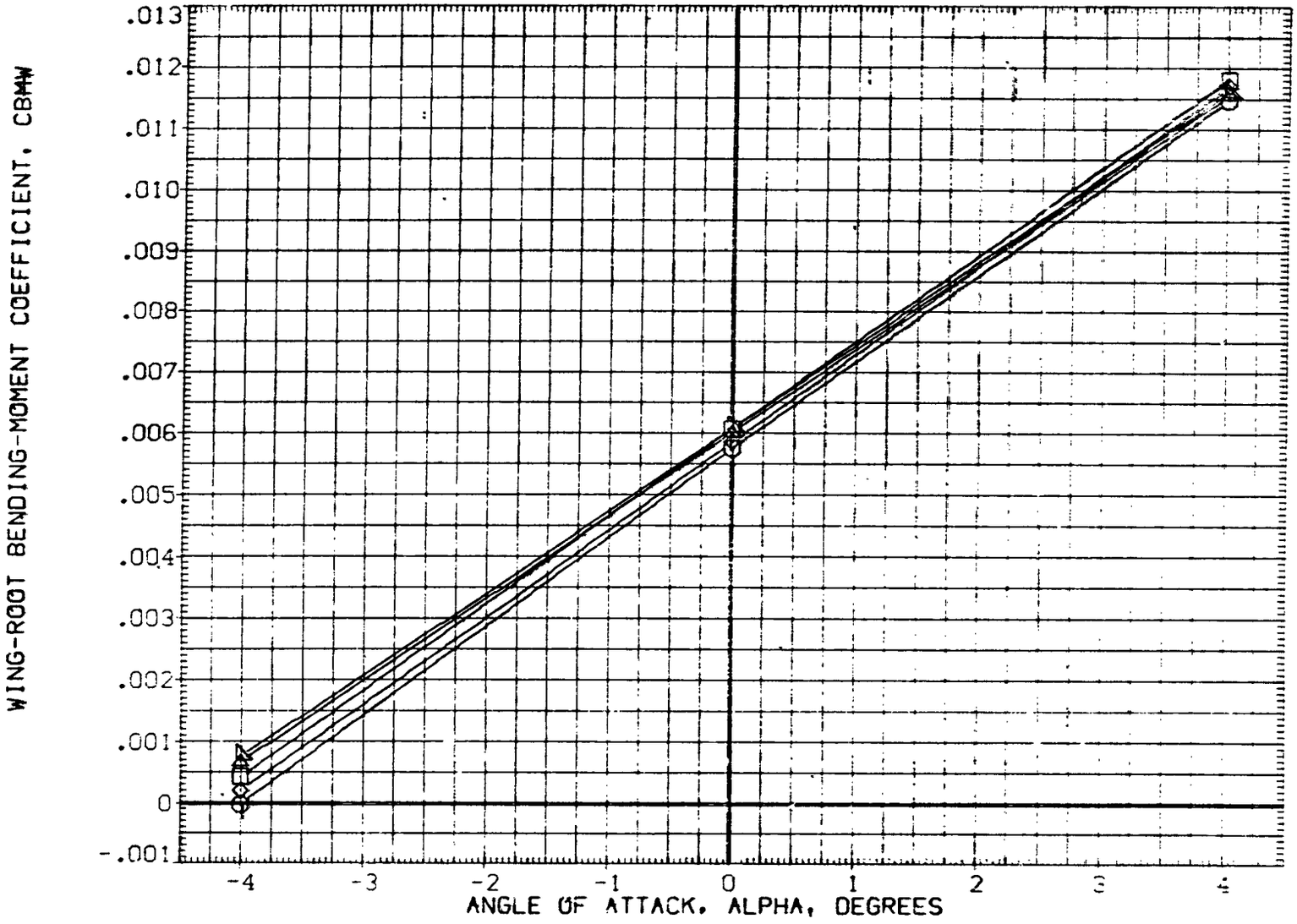


FIG.6 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.2

(A)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X42)	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6X44)	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X43)	ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700
(RE6X45)	ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700
(RE6X46)	ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION

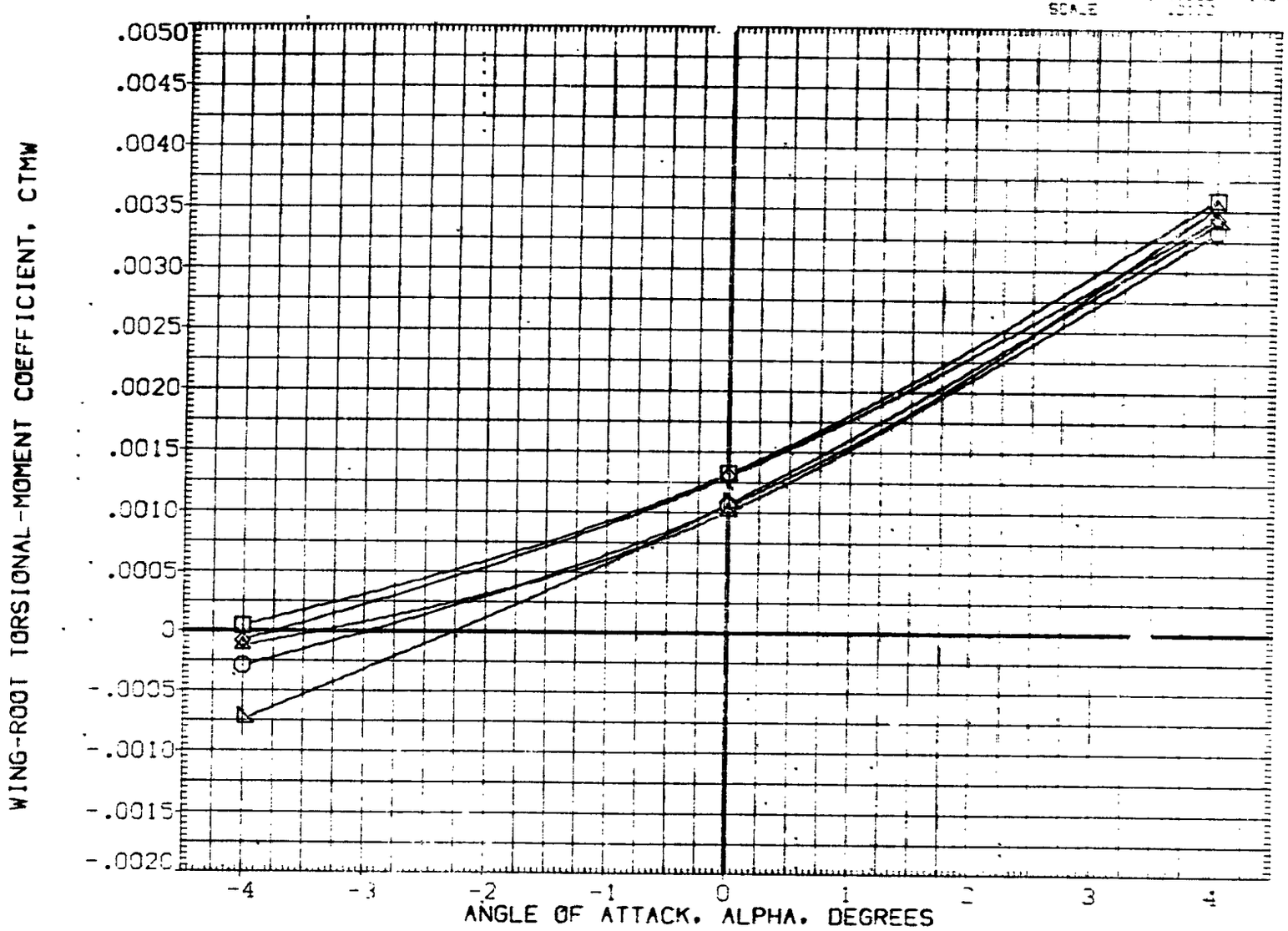


FIG.6 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
(RE6X42)	□	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700	SREF 4680.0000 SQ.FT.
(RE6X44)	◇	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700	BREF 1174.0000 IN.
(RE6X43)	△	ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	2.200	30.700	CREF 1290.0000 IN.
(RE6X45)	▽	ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	2.200	30.700	XMRP 908.0000 IN. XM
(RE6X46)	○	ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	2.200	30.700	YMRP 0.0000 IN. YM
								ZMRP 400.0000 IN. ZM
								SCALE .0100

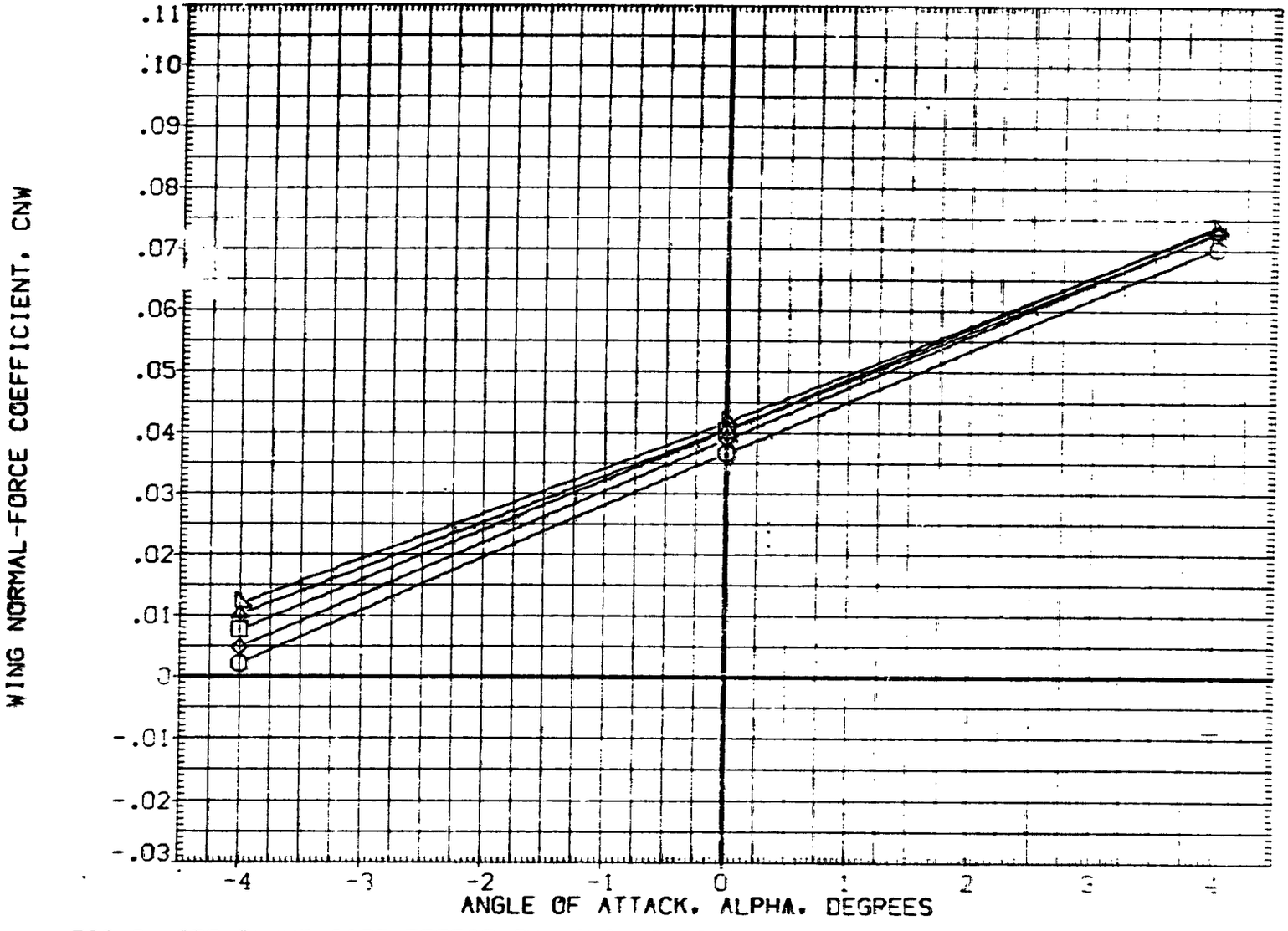


FIG.6 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.2

(A)BETA = .00

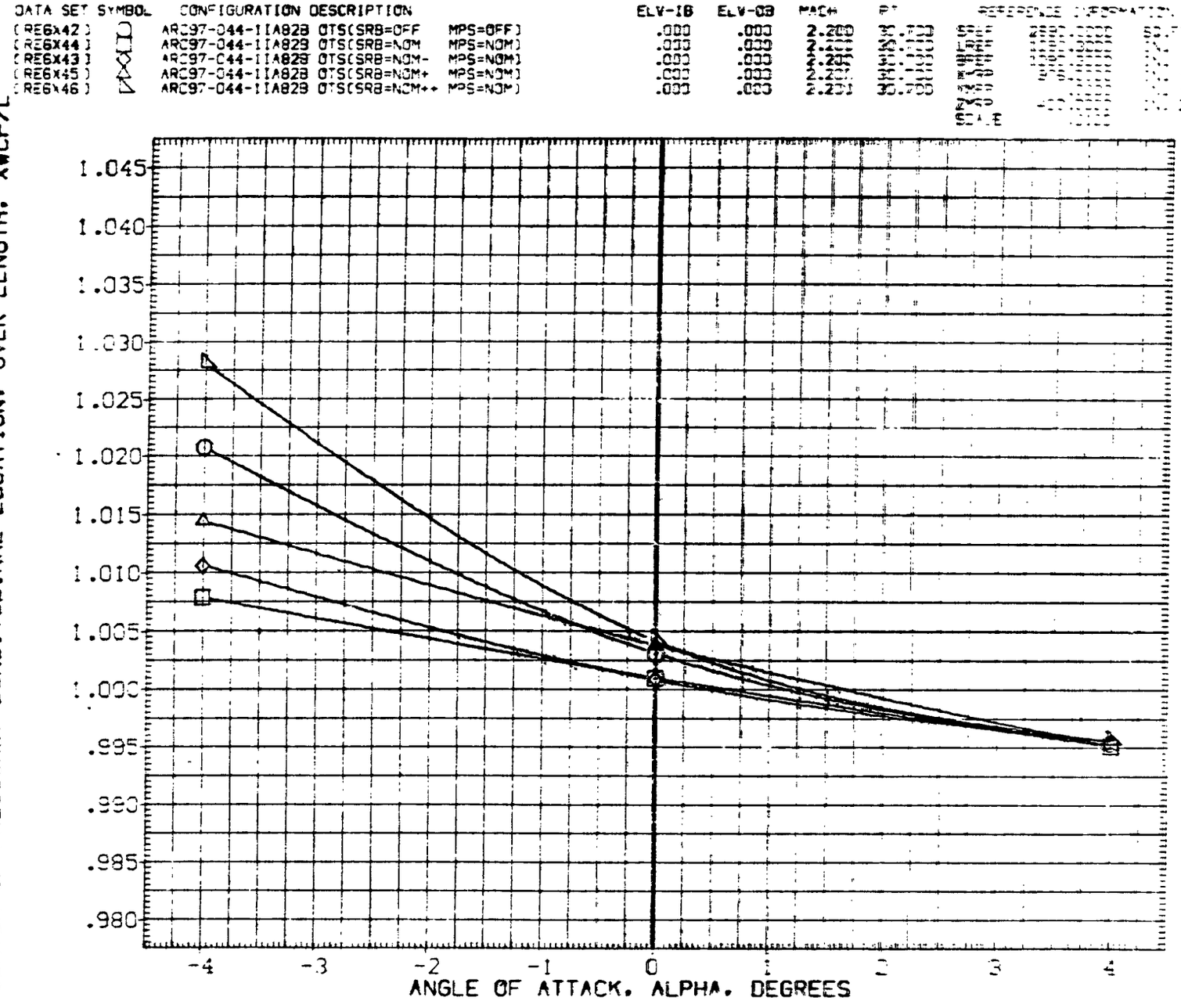


FIG.6 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.2

(A)BETA = .00

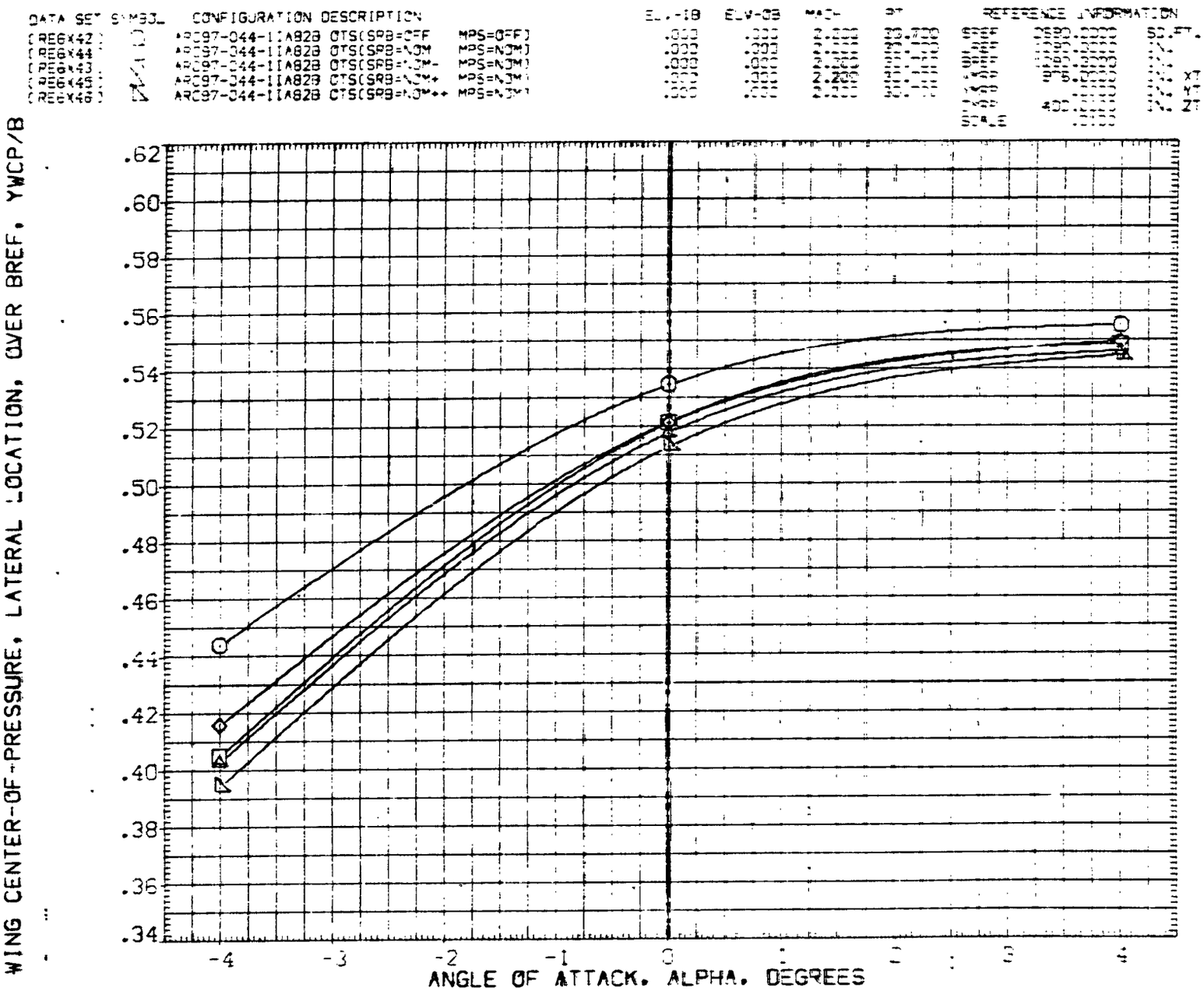


FIG.6 SRB PLUME SIZE EFFECT ON WING LOADS IN PITCH, MACH = 2.2

(A)BETA = .00

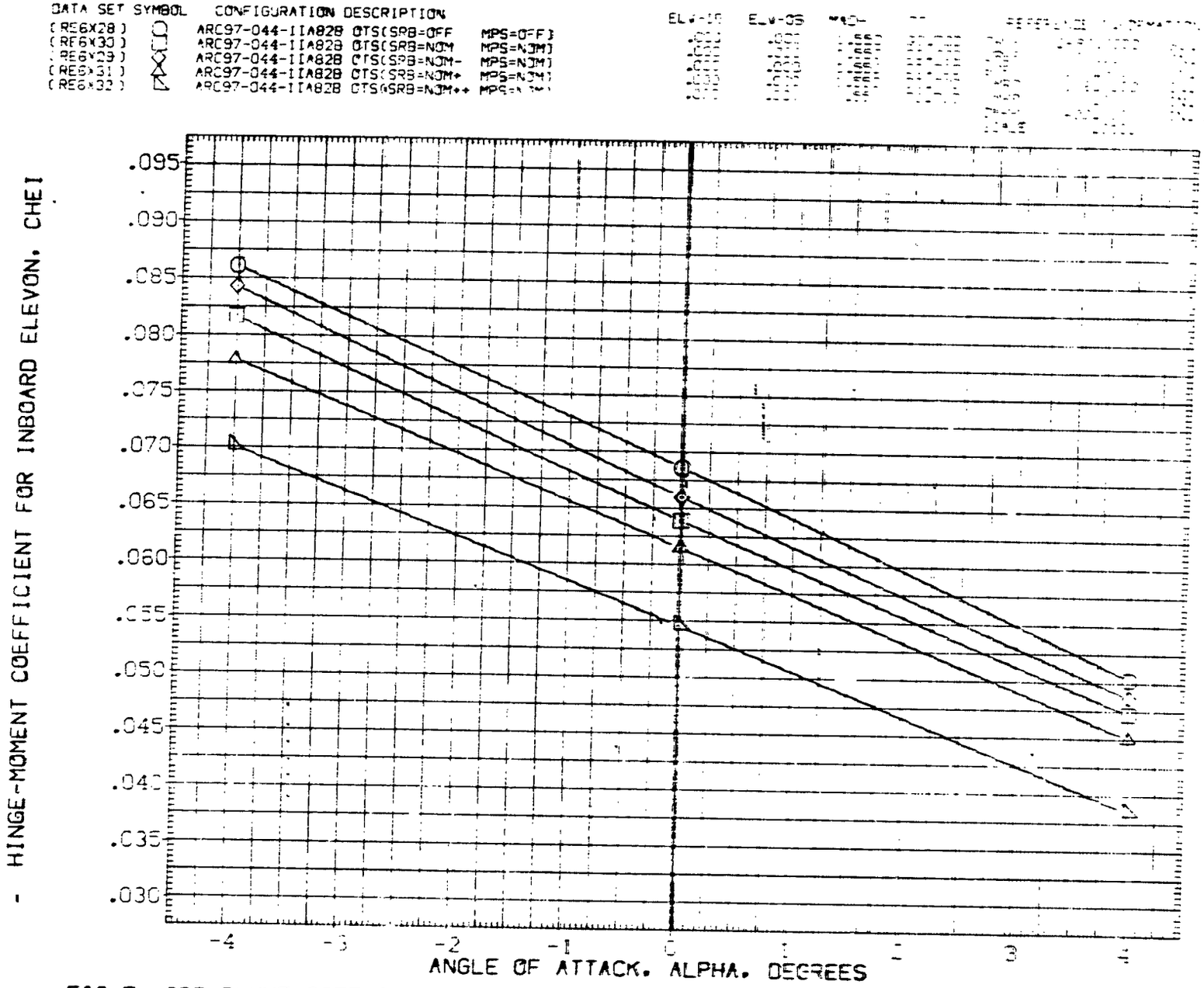


FIG.7 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN PITCH, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X28)	□	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RE6X30)	◇	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6X29)	⊠	ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	1.550	30.700
(RE6X31)	△	ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	1.550	30.700
(RE6X32)	▽	ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	0.0000	IN. AT
YMRP		IN. AT
ZMRP	400.0000	IN. AT
SCALE	.0100	

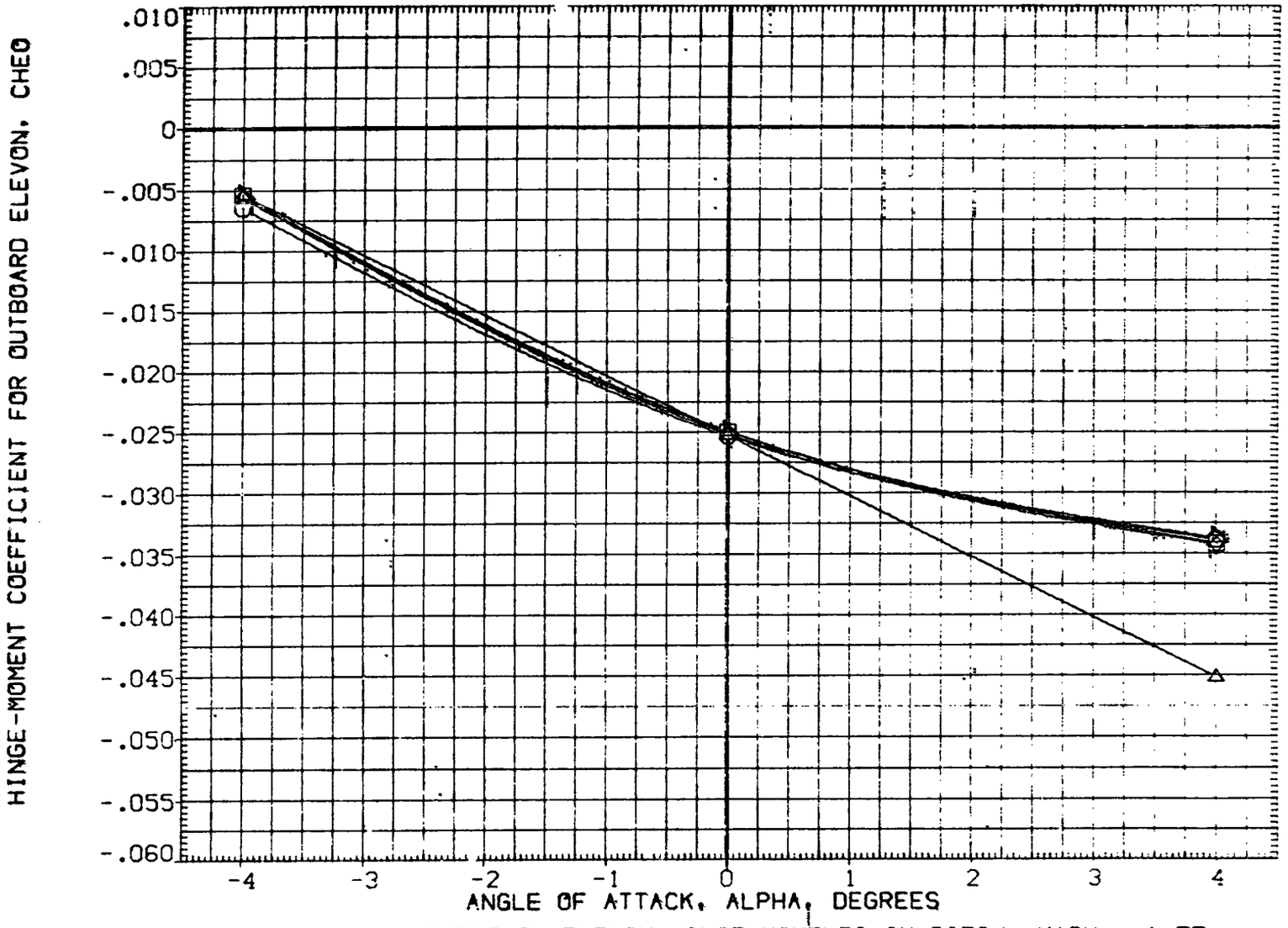


FIG.7 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN PITCH, MACH = 1.55

(A)BETA = . .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X35)	□	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)	◇	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(RE6X36)	△	ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	2.000	30.700
(RE6X38)	⋈	ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	2.000	30.700
(RE6X39)	⋈	ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION

SREF	[illegible]	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN. AT
YMRP	[illegible]	IN. AT
ZMRP	[illegible]	IN. AT
SCALE	.0150	

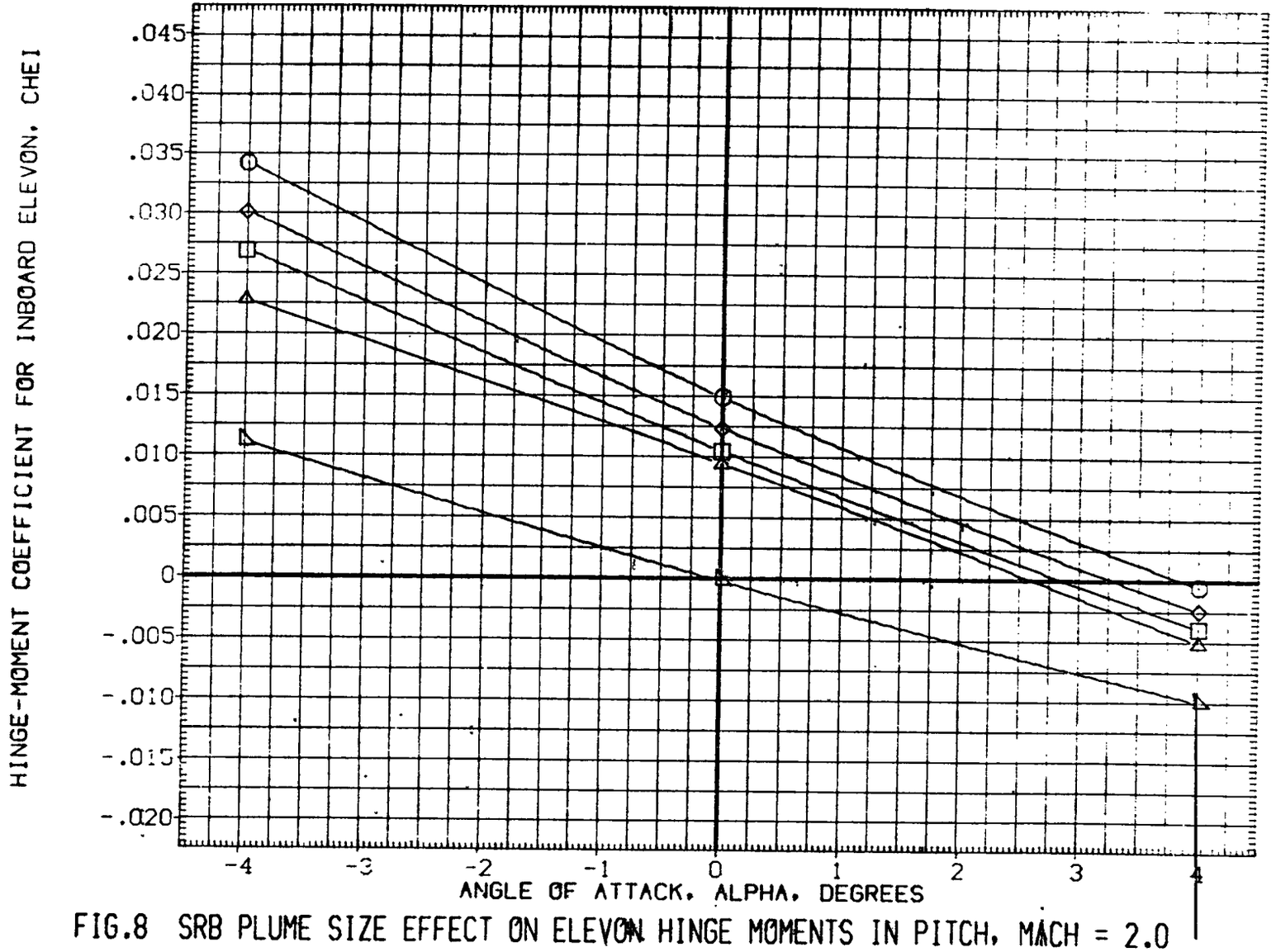


FIG.8 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)		ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X36)		ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.000	30.700
(RE6X38)		ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.000	30.700
(RE6X39)		ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

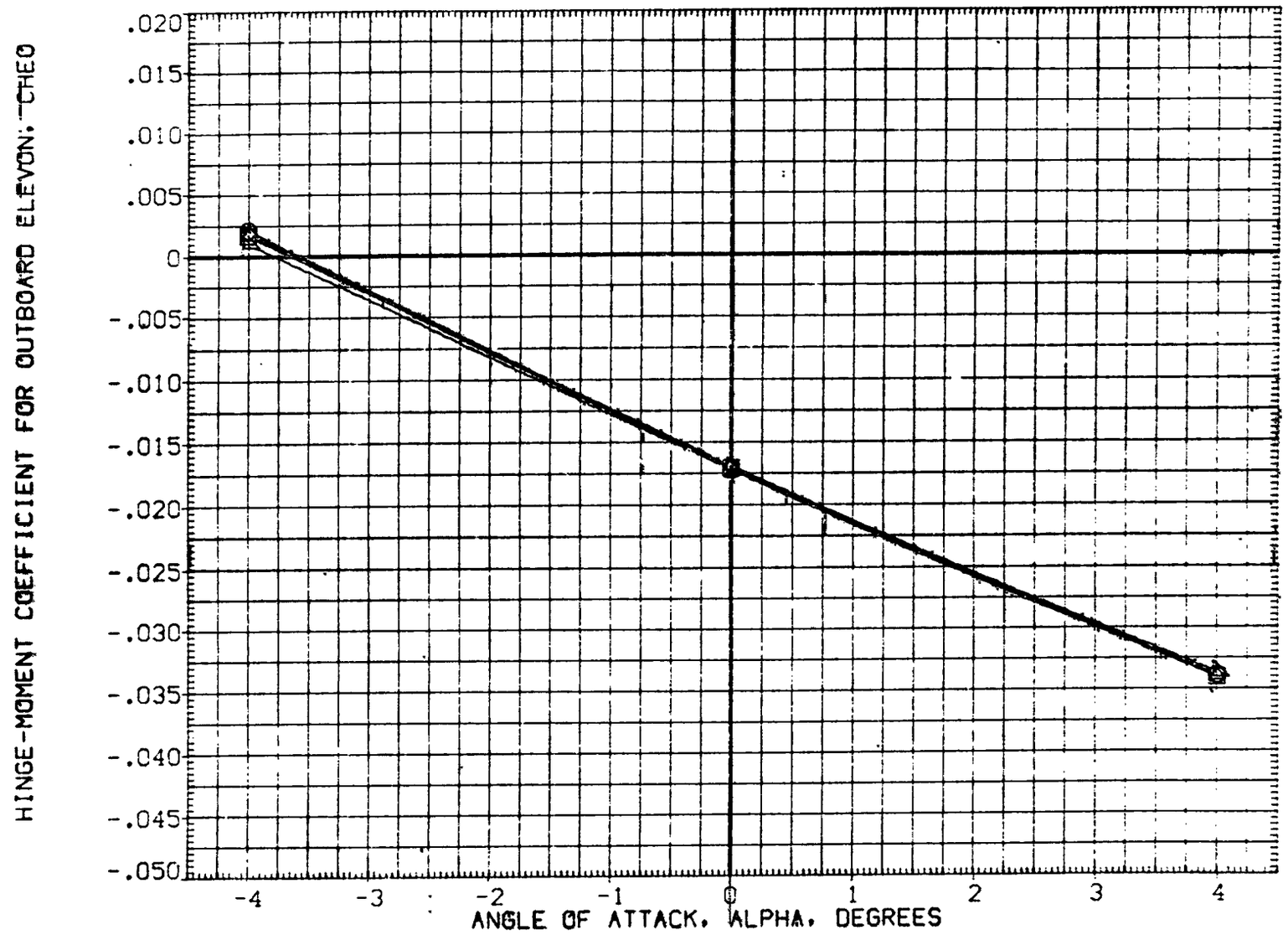


FIG.8 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	
(RE6x42)		ARC97-044-1[A82B OTS(SRB=OFF	MPS=OFF)
(RE6x44)		ARC97-044-1[A82B OTS(SRB=NOM	MPS=NOM)
(RE6x43)		ARC97-044-1[A82B OTS(SRB=NOM-	MPS=NOM)
(RE6x45)		ARC97-044-1[A82B OTS(SRB=NOM+	MPS=NOM)
(RE6x46)		ARC97-044-1[A82B OTS(SRB=NOM++	MPS=NOM)

ELV-IB	ELV-OB	MACH	PT
.000	.000	2.200	30.700
.000	.000	2.200	30.700
.000	.000	2.200	30.700
.000	.000	2.200	30.700
.000	.000	2.200	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1190.3000	IN.
BREF	1190.3000	IN.
XMRP	996.0000	IN. XB
YMRP	.0000	IN. YB
ZMRP	400.0000	IN. ZB
SCALE	.0100	

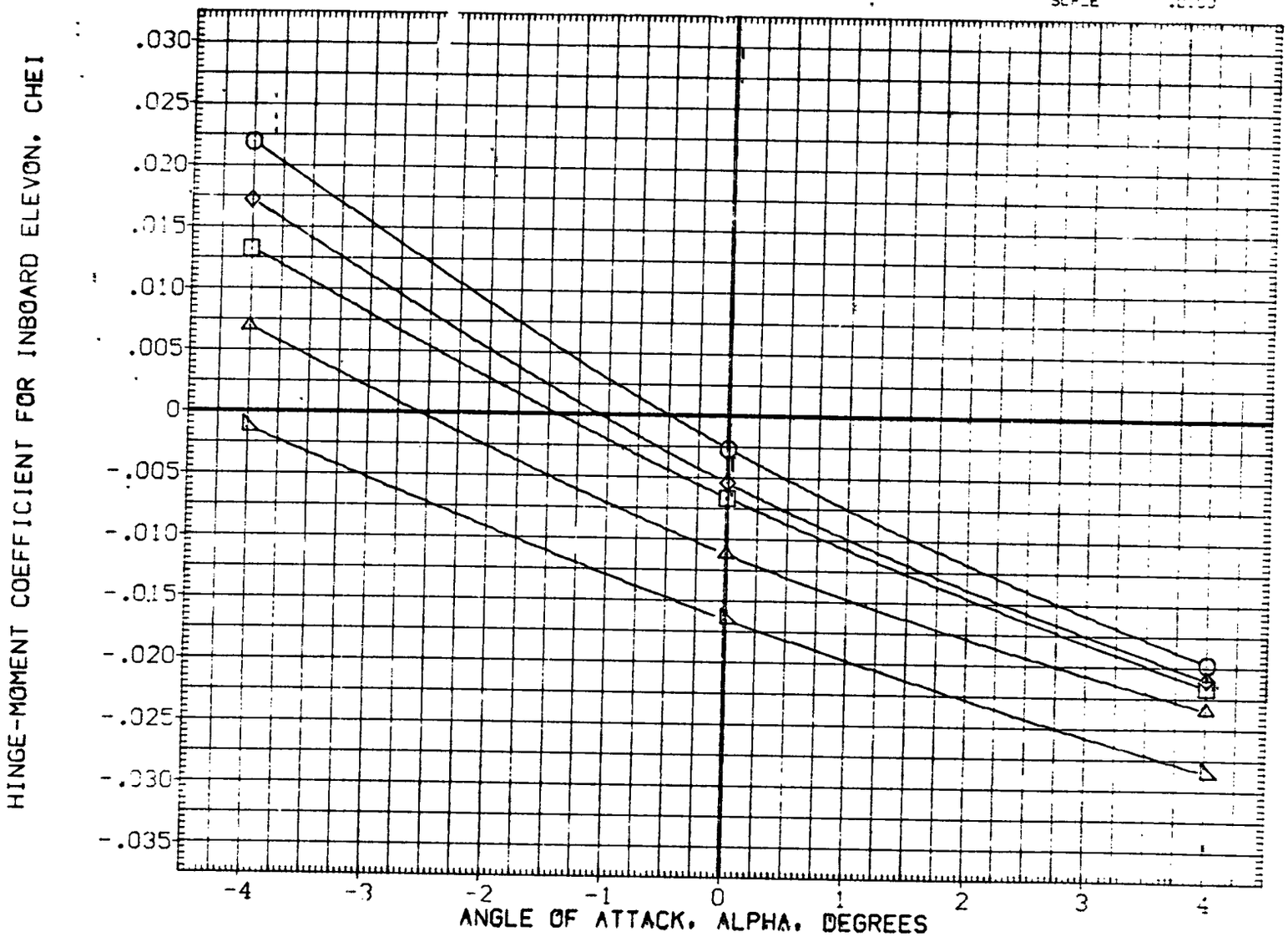


FIG.9 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN PITCH, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X42)	□	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6X44)	◇	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X43)	△	ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700
(RE6X45)	▽	ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700
(RE6X46)	◁	ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. WT
YMRP	.0000	IN. WT
ZMRP	400.0000	IN. WT
SCALE	.0100	

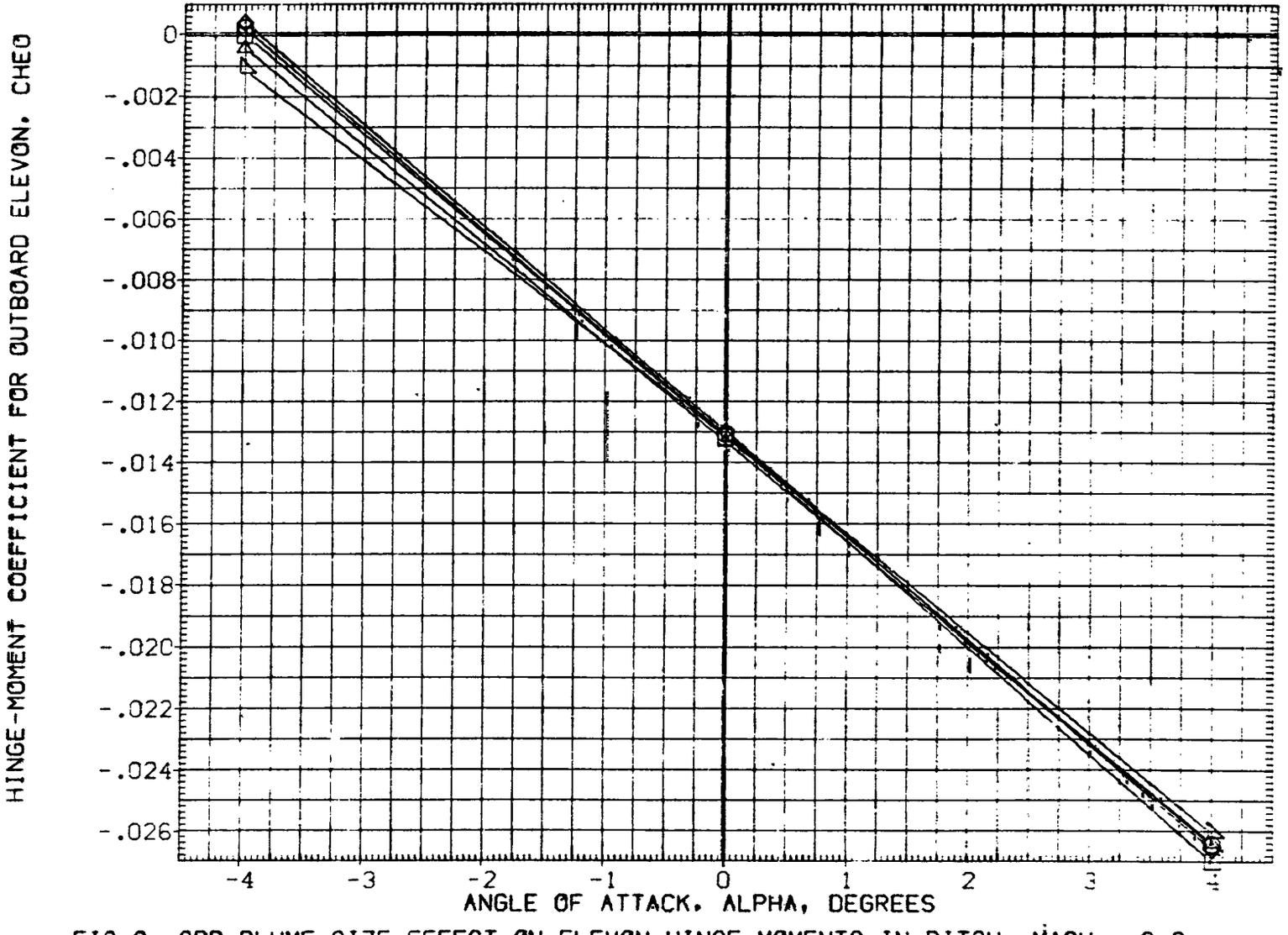


FIG.9 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN PITCH, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	P*	REFERENCE INFORMATION
(RE6Y28)		ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700	SREF 2690.0000 SQ.FT.
(RE6Y30)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700	LREF [illegible]
(RE6Y29)		ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	1.550	30.700	[illegible]
(RE6Y31)		ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	1.550	30.700	[illegible]
(RE6Y32)		ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	1.550	30.700	[illegible]

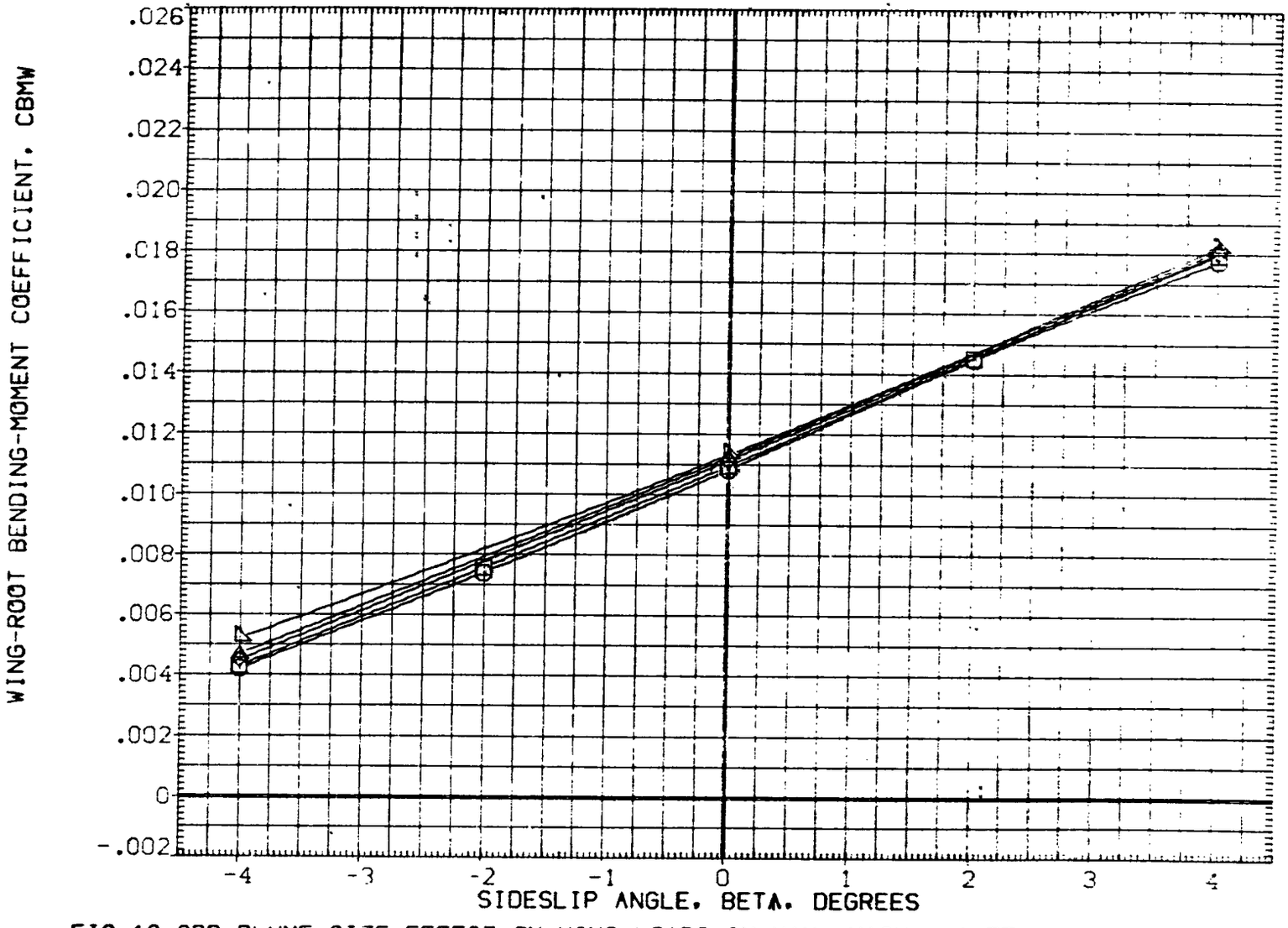


FIG.10 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACh	PT
(PS6138)		ARC97-044-11A828 OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(PS6139)		ARC97-044-11A828 OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(PS6140)		ARC97-044-11A828 OTS(SRB=NOM- MPS=NOM)	.000	.000	1.550	30.700
(PS6141)		ARC97-044-11A828 OTS(SRB=NOM+ MPS=NOM)	.000	.000	1.550	30.700
(PS6142)		ARC97-044-11A828 OTS(SRB=NOM++ MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
CREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. AT
YMRP	.0000	IN. Y=
ZMRP	400.0000	IN. Z=
SCALE	.0100	

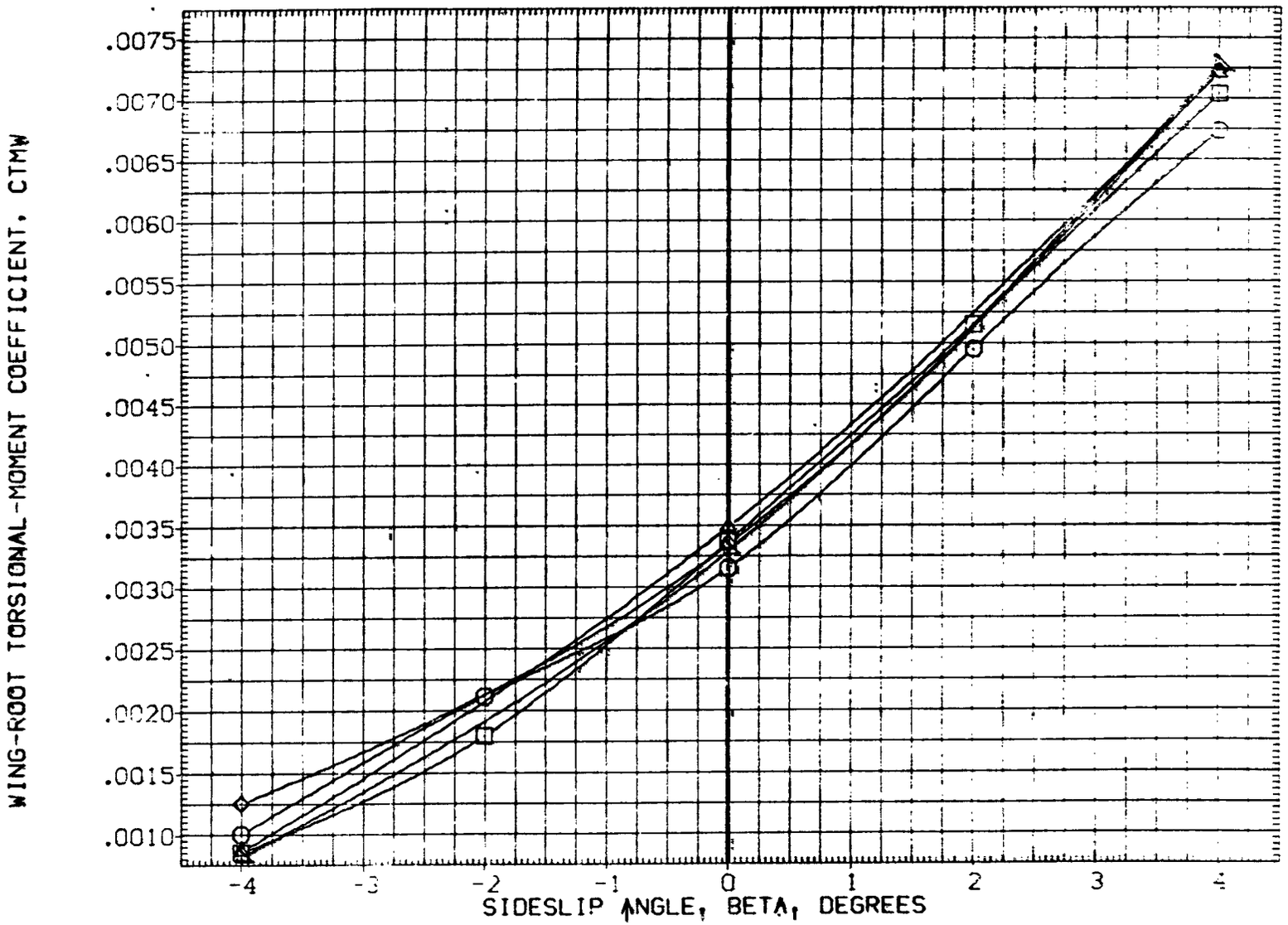


FIG.10 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RS6Y28)	□	ARC87-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RS6Y30)	◇	ARC87-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RS6Y29)	△	ARC87-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	1.550	30.700
(RS6Y31)	▽	ARC87-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	1.550	30.700
(RS6Y32)	⊲	ARC87-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

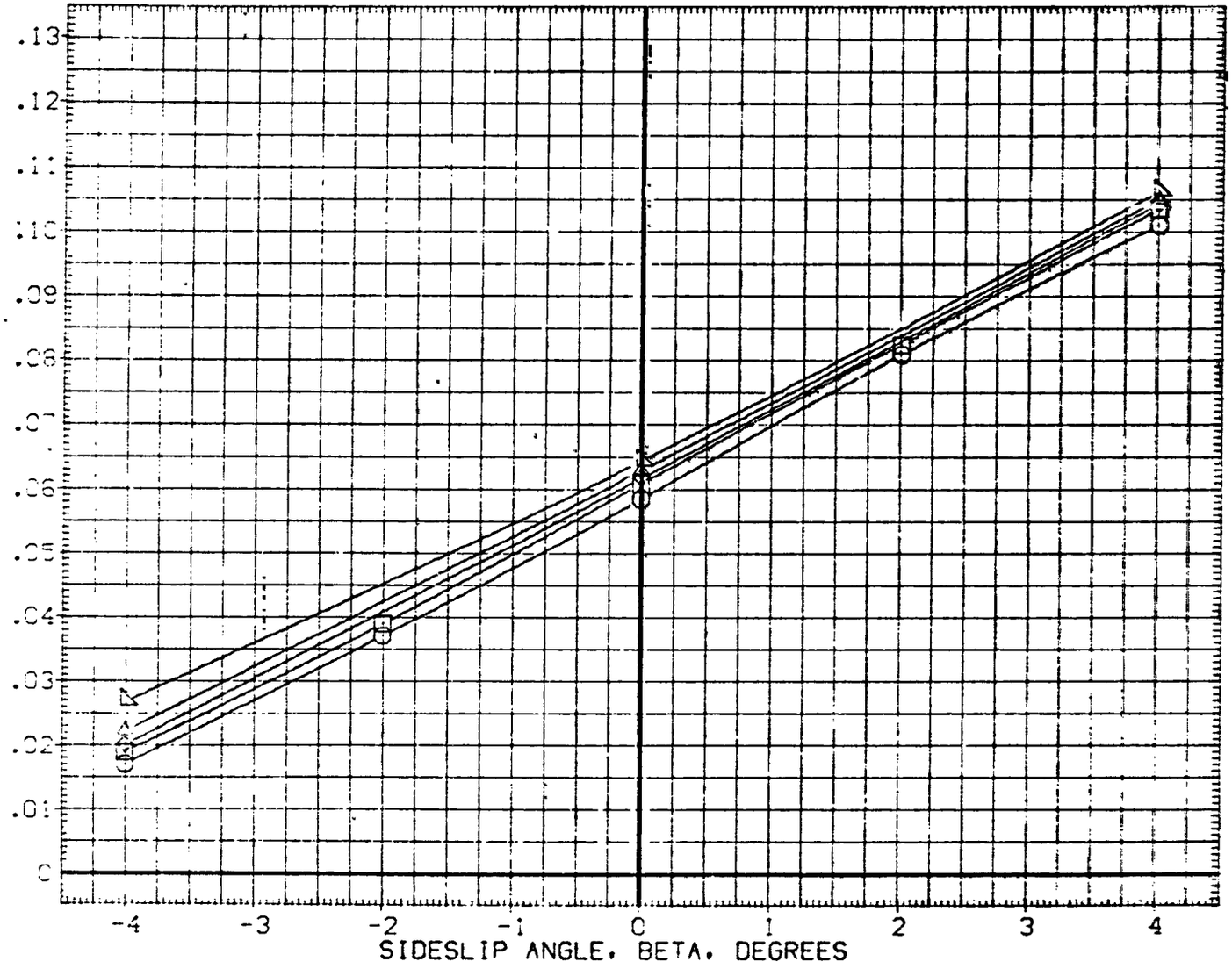


FIG.10 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 1.55

(A)ALPHA = .00

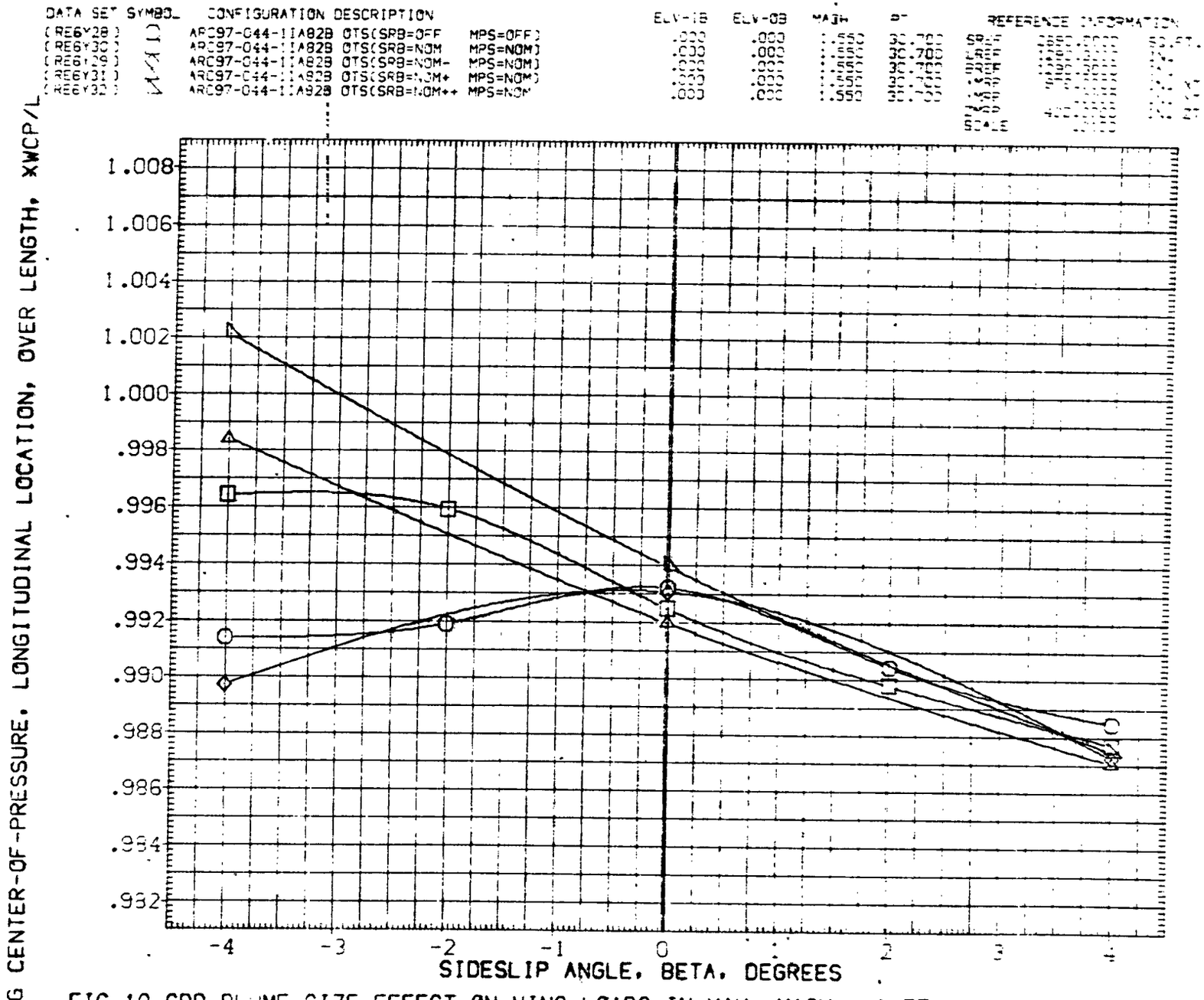


FIG.10 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
(RE6Y28)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700	SREF 2690.0000 SQ.FT.
(RE6Y30)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700	LREF 1290.3000 IN.
(RE6Y29)		ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	1.550	30.700	BREF 1164.0000 IN.
(RE6Y31)		ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	1.550	30.700	XMRP 1040.0000 IN. YM
(RE6Y32)		ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	1.550	30.700	ZMRP 400.0000 IN. ZM
								SCALE 1.0

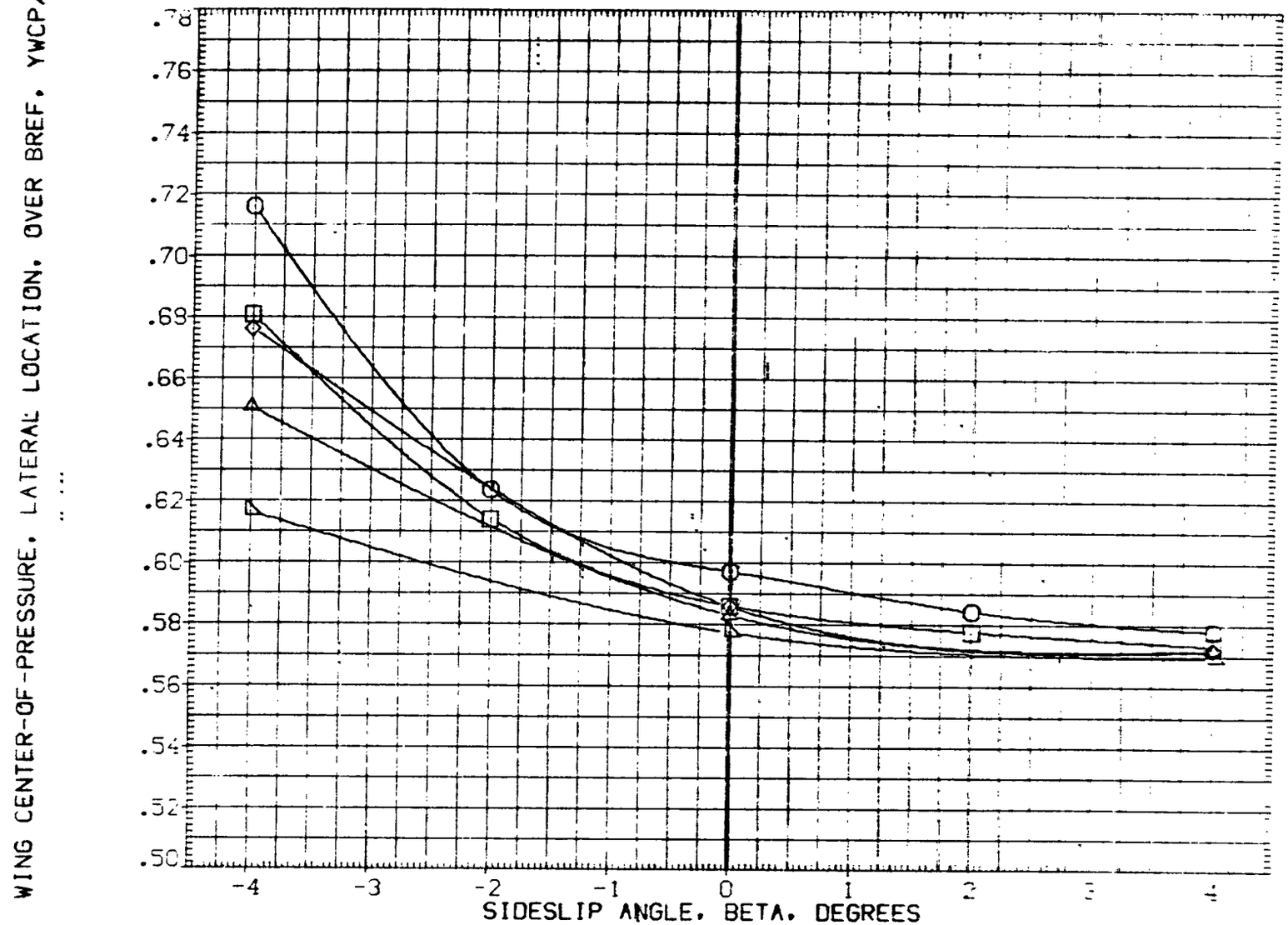


FIG.10 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
(REGY35)	◻	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700	SREF 2680.0000
(REGY37)	◻	ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	LREF 1290.0000
(REGY36)	◻	ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.000	30.700	BREF 1290.0000
(REGY38)	◻	ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.000	30.700	XMRP 974.0000
(REGY39)	◻	ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.000	30.700	YMRP .0000
							ZMRP 402.0000
							SCALE 1.0000

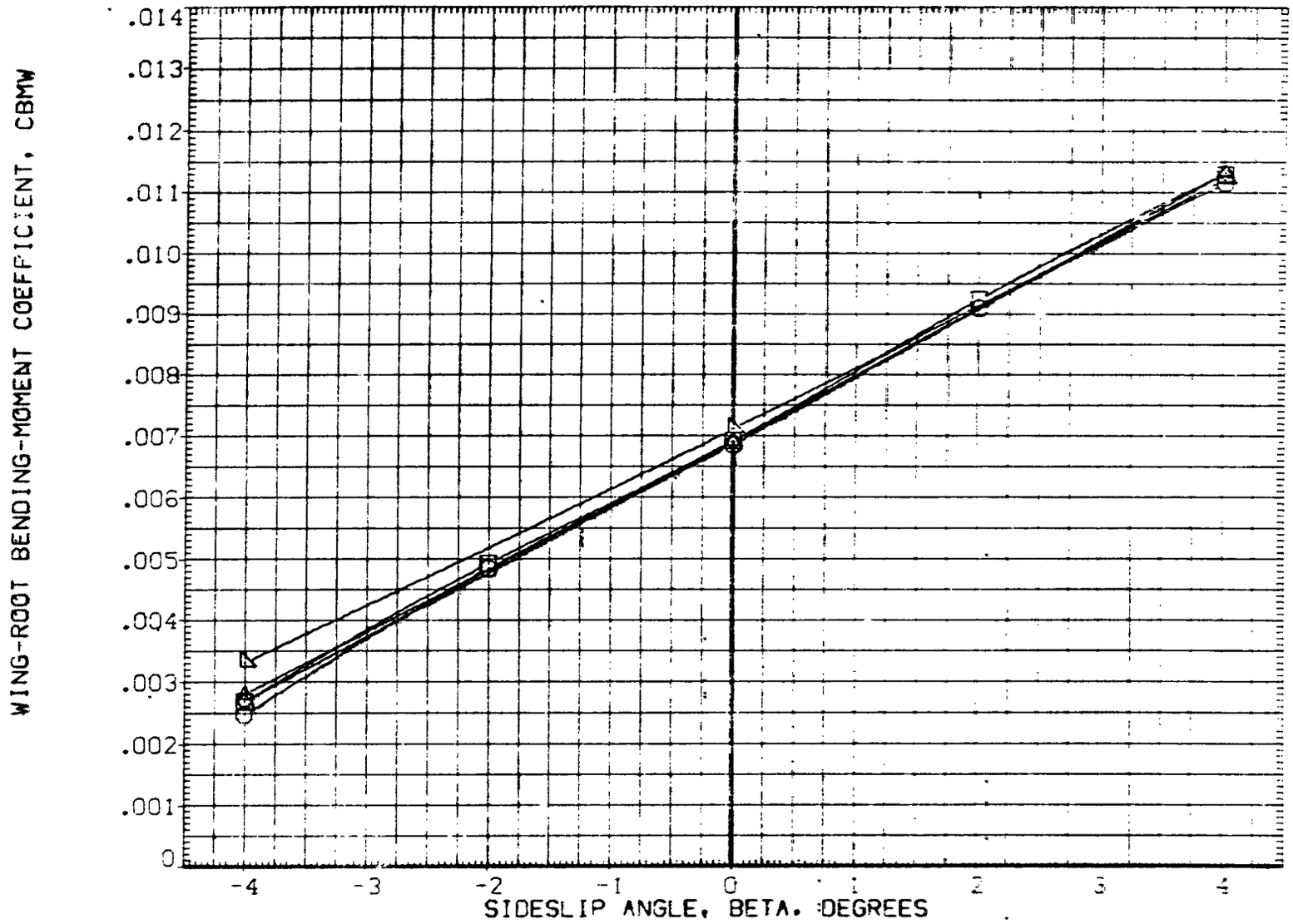


FIG.11 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y35)		ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6Y37)		ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6Y36)		ARC97-044-IIA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.000	30.700
(RE6Y38)		ARC97-044-IIA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.000	30.700
(RE6Y39)		ARC97-044-IIA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1190.0000	IN.
BREF	1990.0000	IN.
XMRP	996.0000	IN. XT
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0100	

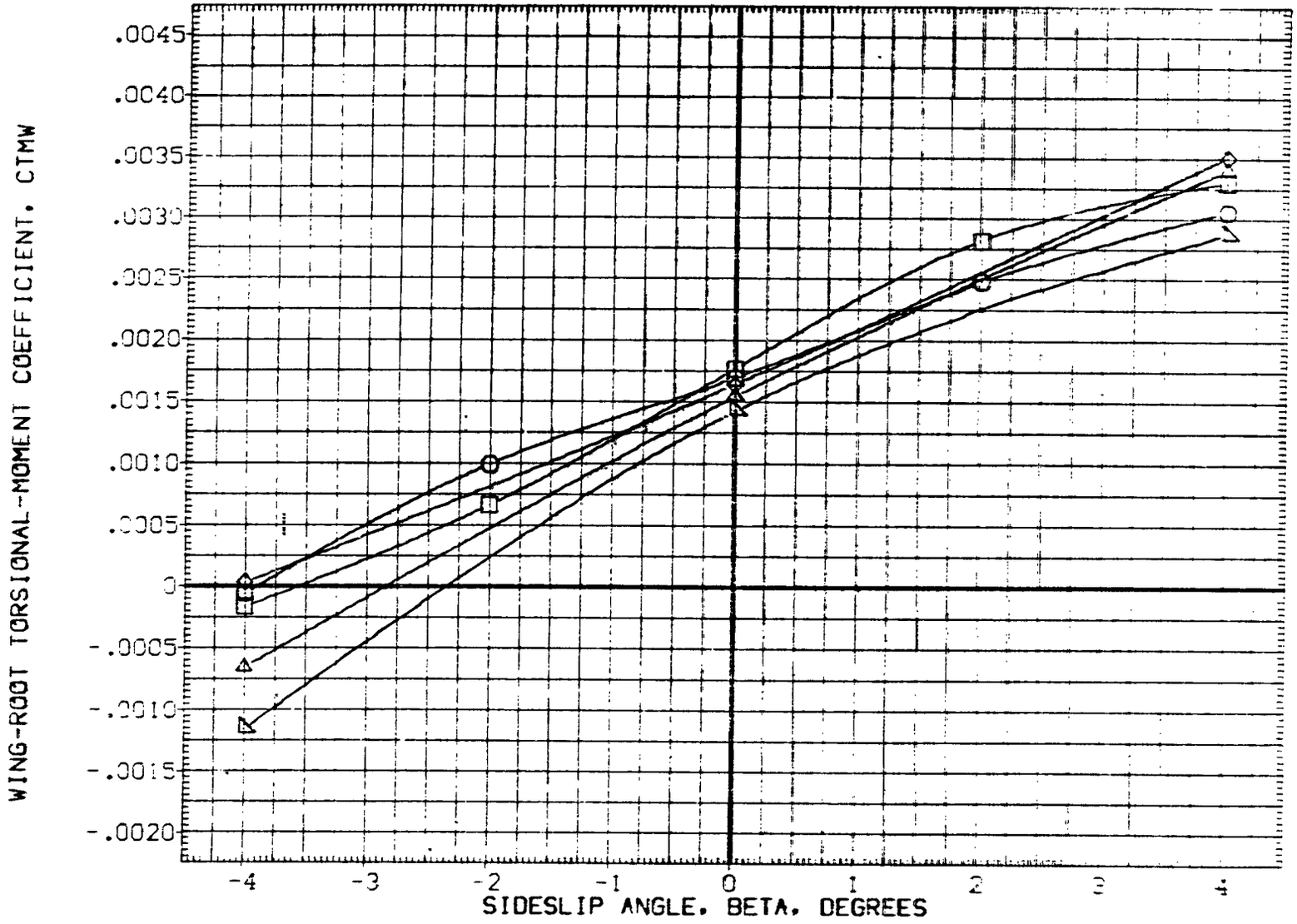


FIG.11 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		EL.-IB	EL.-OB	MACH	PT	REFERENCE INFORMATION	
(RE6Y35)		AC97-044-IIA828	GTS(SRB=OFF | MPS=OFF)	.000	.000	2.300	30.700	SREF 7680.0000	SQ.FT.
(RE6Y37)		AC97-044-IIA828	GTS(SRB=NOM | MPS=NOM)	.000	.000	2.300	30.700	LREF 1280.0000	IN.
(RE6Y38)		AC97-044-IIA828	GTS(SRB=NOM- | MPS=NOM)	.000	.000	2.300	30.700	BREF 1280.0000	IN.
(RE6Y39)		AC97-044-IIA828	GTS(SRB=NOM+ | MPS=NOM)	.000	.000	2.300	30.700	XMRP 876.0000	IN. XT
(RE6Y36)		AC97-044-IIA828	GTS(SRB=NOM++ | MPS=NOM)	.000	.000	2.300	30.700	YMRP .0000	IN. YT
									ZMRP 400.0000	IN. ZT
									SCALE .2000	

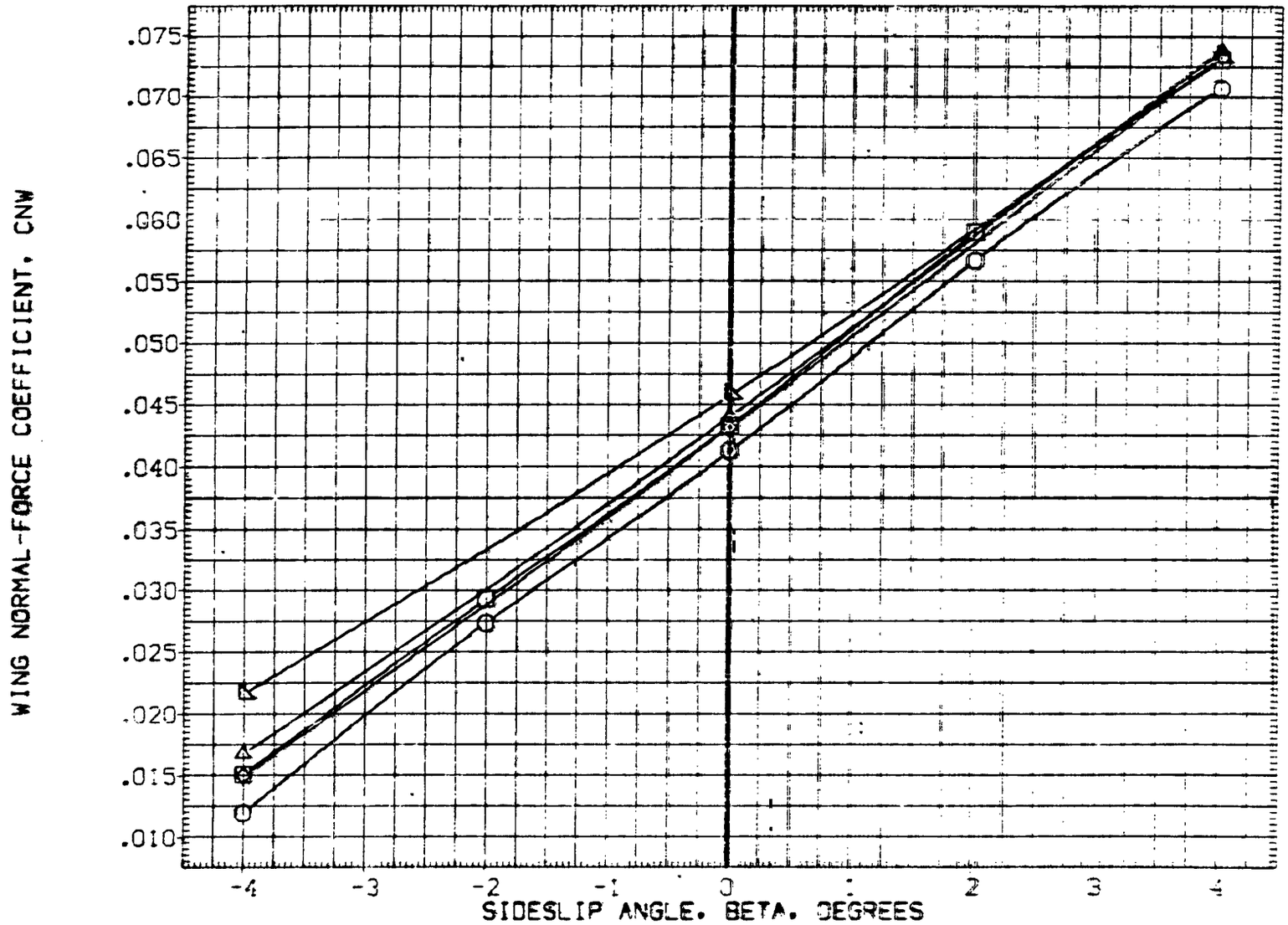


FIG.11 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.0

(A)ALPHA = .00

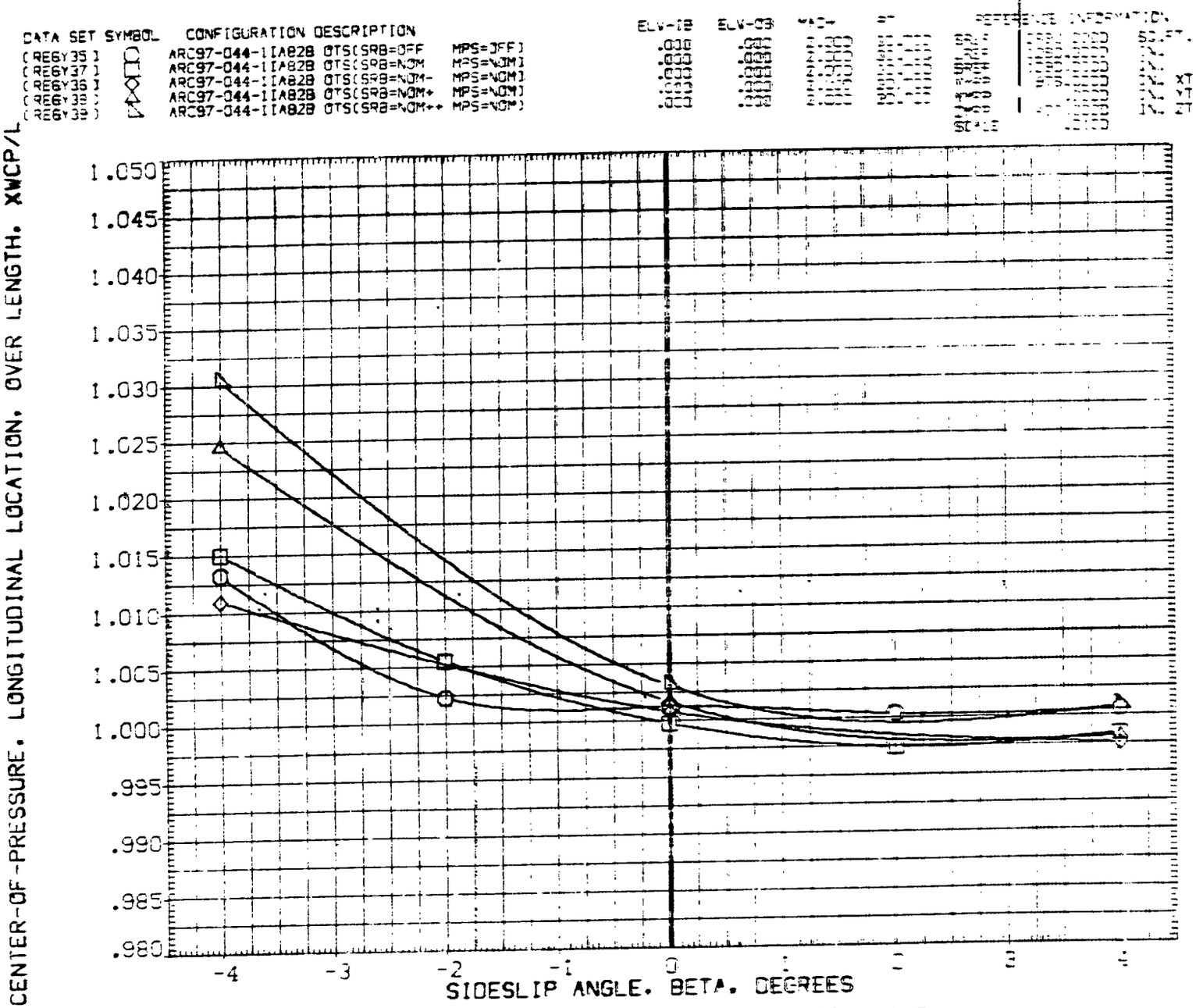


FIG.11 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y35)	○	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6Y37)	□	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6Y36)	◇	ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.000	30.700
(RE6Y38)	⊠	ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.000	30.700
(RE6Y39)	△	ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

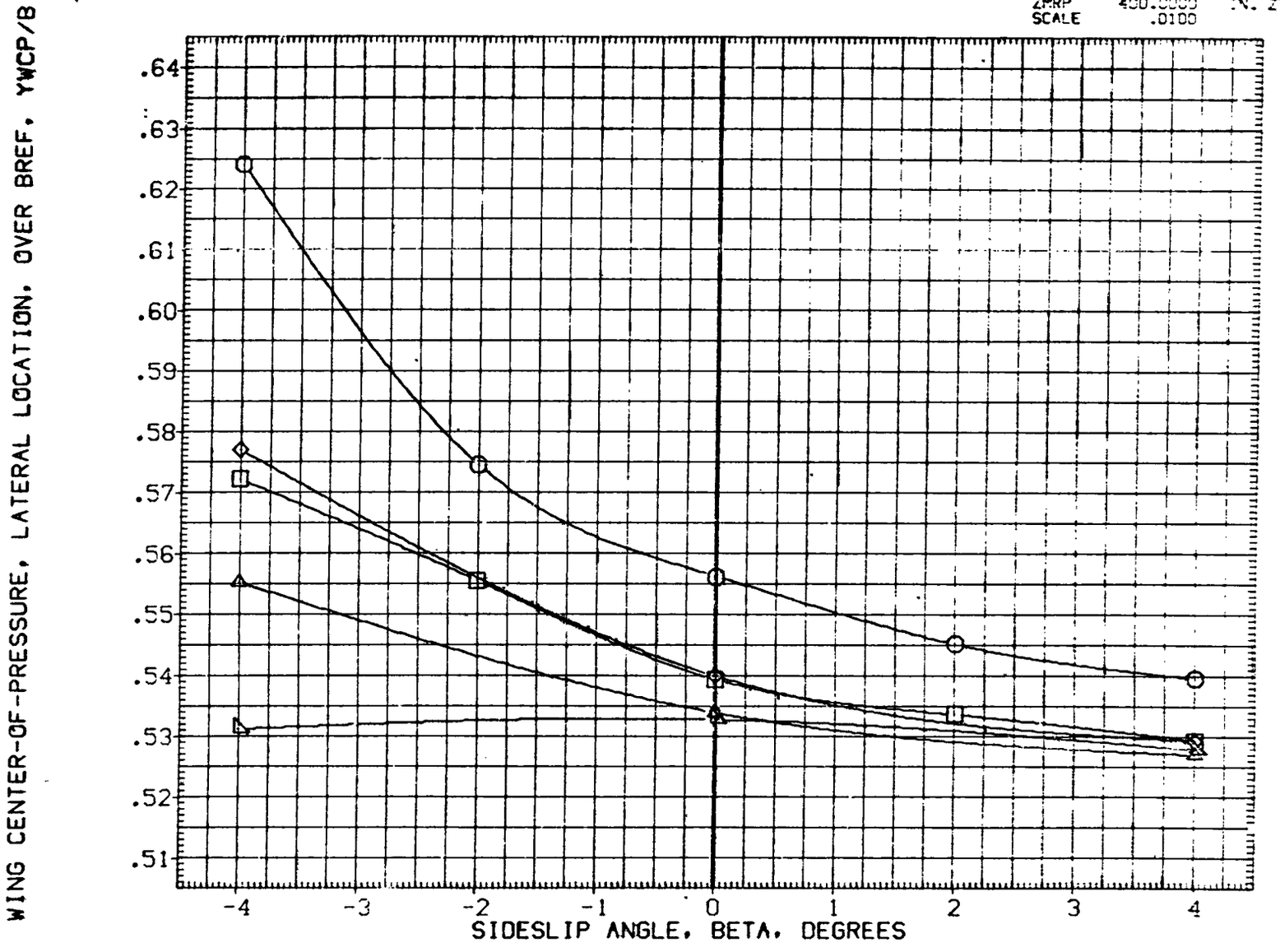


FIG.11 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y42)		ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6Y44)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6Y43)		ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700
(RE6Y45)		ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700
(RE6Y46)		ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	1345.0000	IN.
YMRP	0.0000	IN.
ZMRP	400.0000	IN.
SCALE	1.0000	

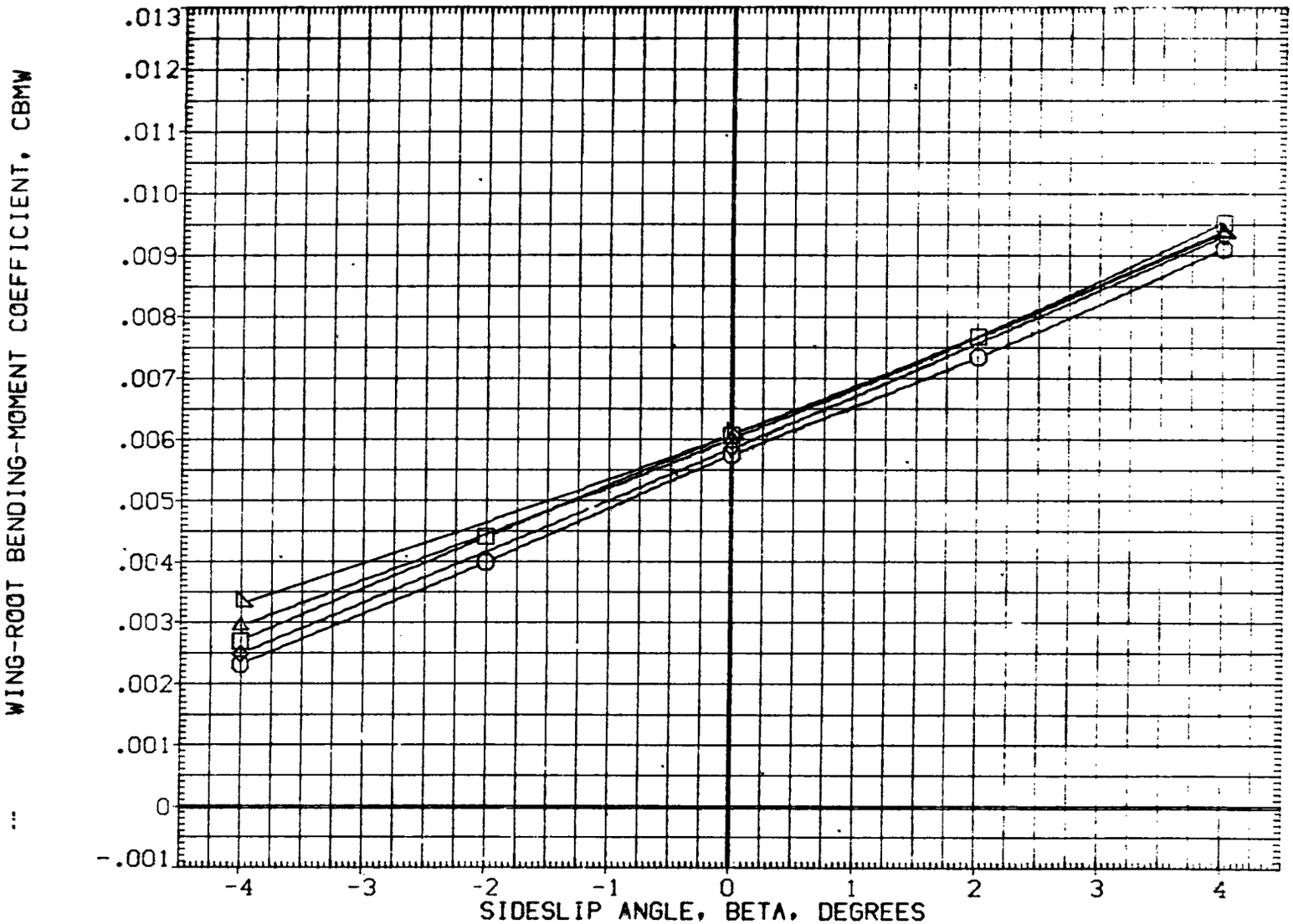


FIG.12 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y42)		ARC97-044-11A82B GTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6Y44)		ARC97-044-11A82B GTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6Y43)		ARC97-044-11A82B GTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700
(RE6Y45)		ARC97-044-11A82B GTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700
(RE6Y46)		ARC97-044-11A82B GTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

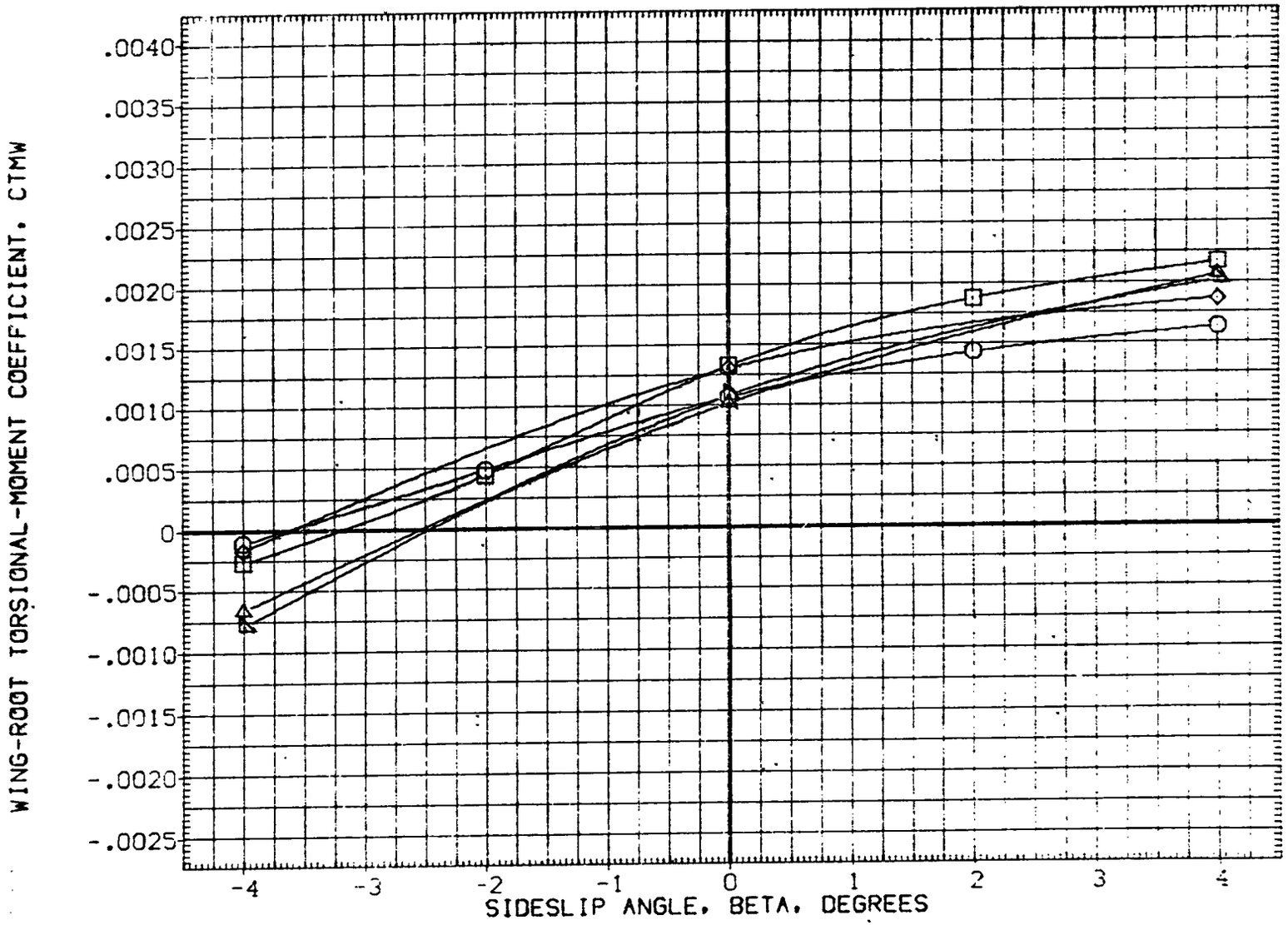


FIG.12 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y42)	□	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700
(RE6Y44)	◇	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700
(RE6Y43)	△	ARC97-044-11A82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	2.200	30.700
(RE6Y45)	▽	ARC97-044-11A82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	2.200	30.700
(RE6Y46)	○	ARC97-044-11A82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	413.0000	IN. ZT
SCALE	.0100	

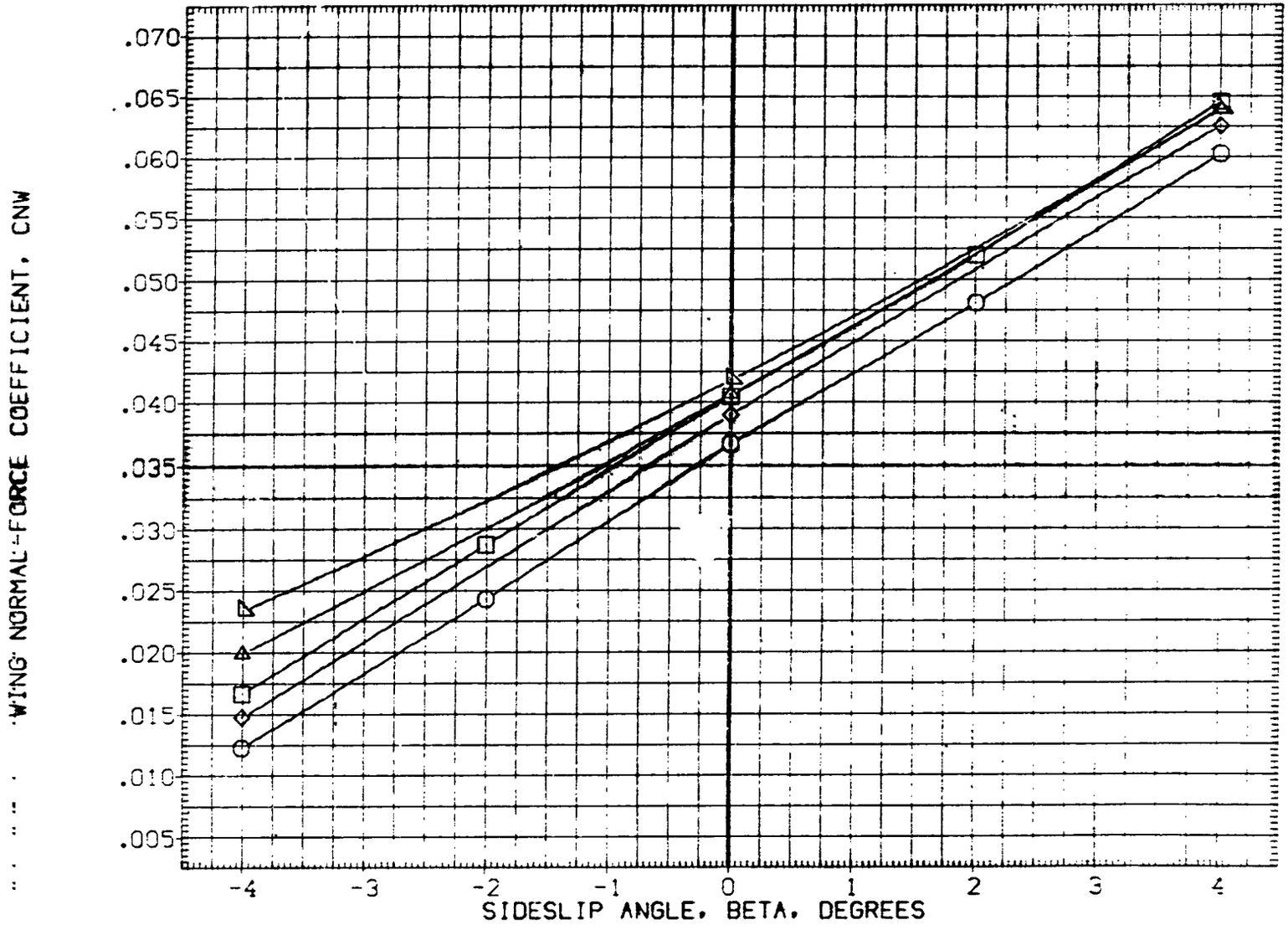


FIG.12 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y42)		ARC97-044-1IA82B	OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6Y44)		ARC97-044-1IA82B	OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6Y43)		ARC97-044-1IA82B	OTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700
(RE6Y45)		ARC97-044-1IA82B	OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700
(RE6Y46)		ARC97-044-1IA82B	OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	979.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

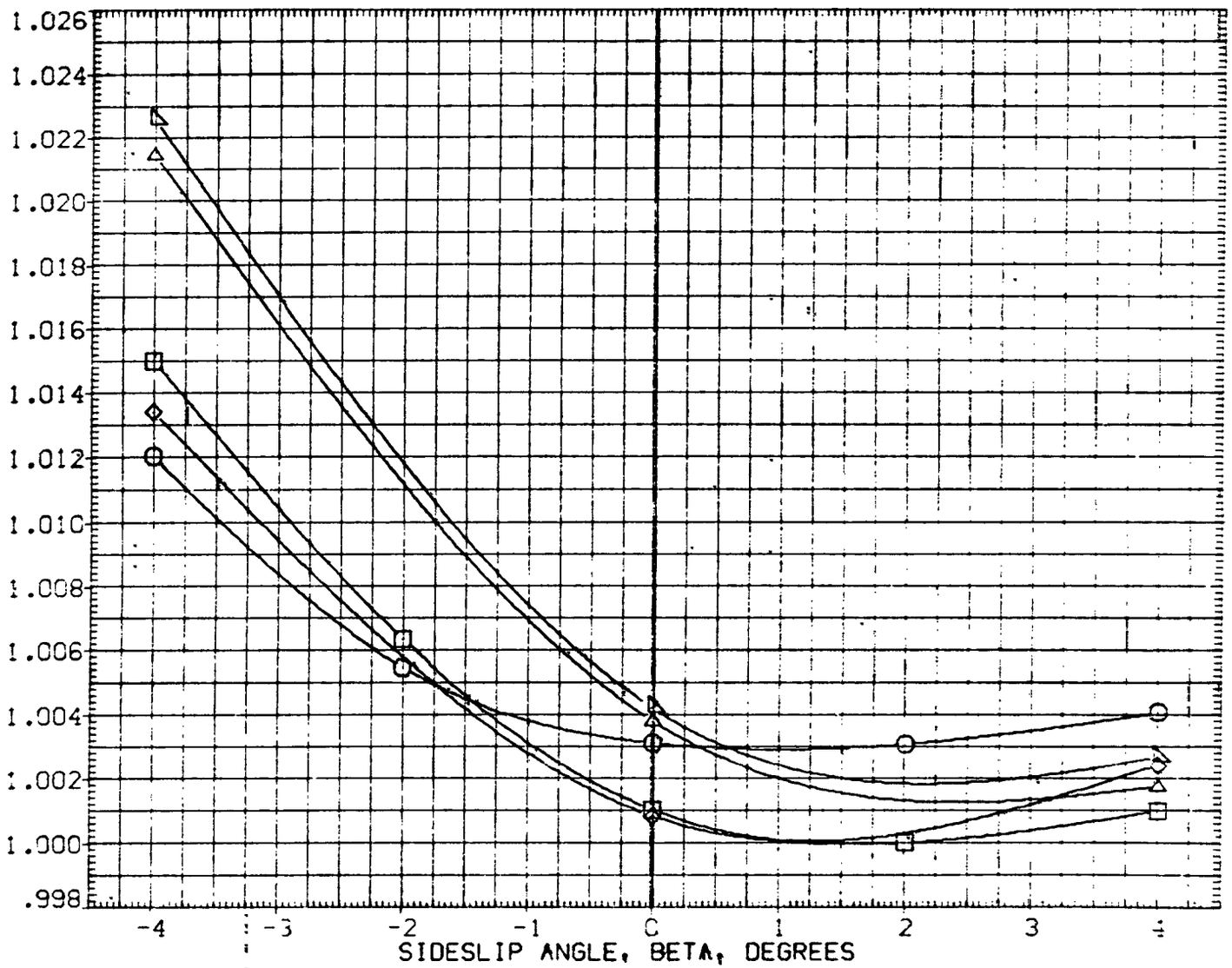


FIG.12 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.2

(A)ALPHA = .00

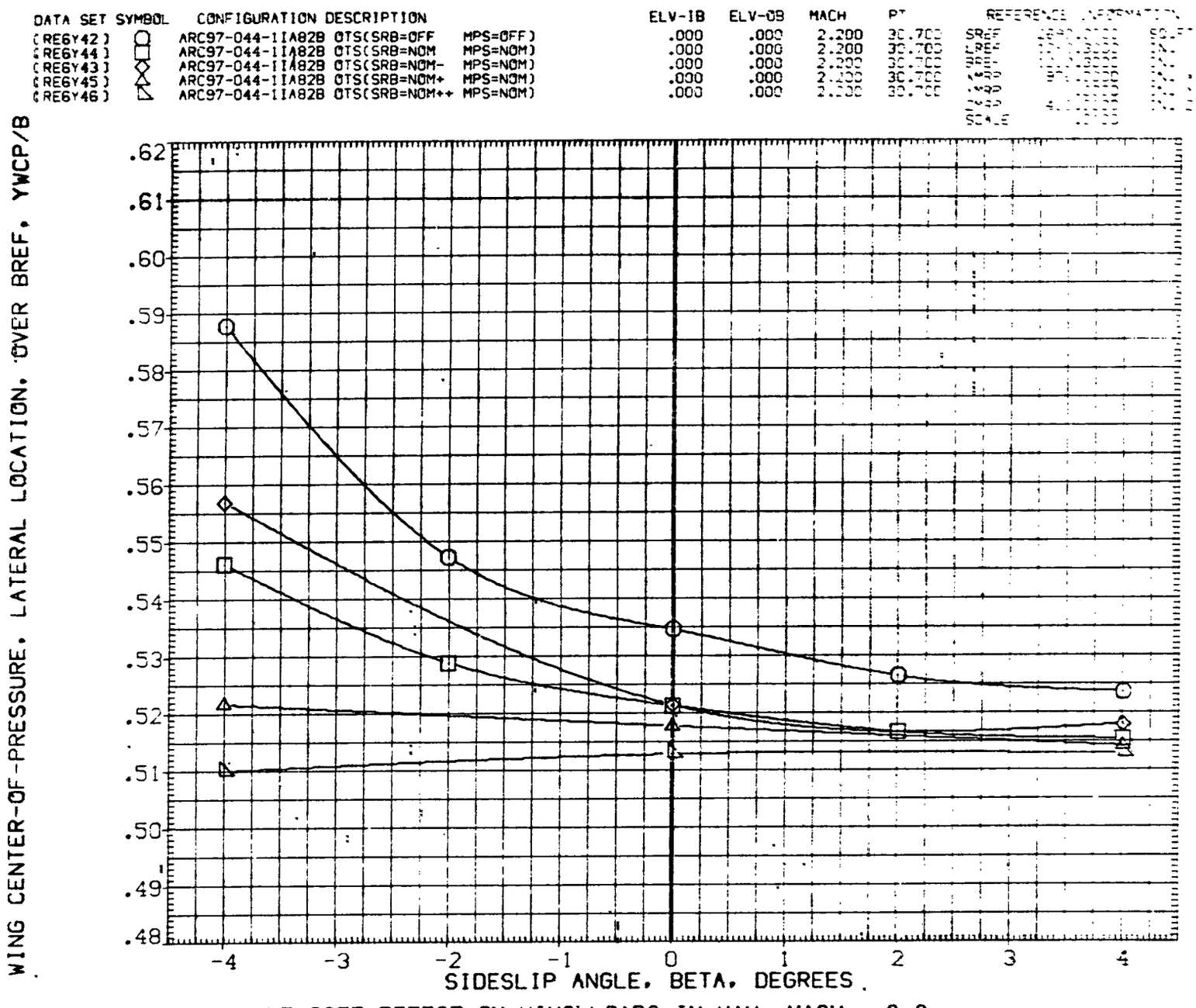


FIG.12 SRB PLUME SIZE EFFECT ON WING LOADS IN YAW, MACH = 2.2

(A)ALPHA = . .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y26)	□	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RE6Y30)	◇	ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6Y29)	△	ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	1.550	30.700
(RE6Y31)		ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	1.550	30.700
(RE6Y32)		ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	979.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

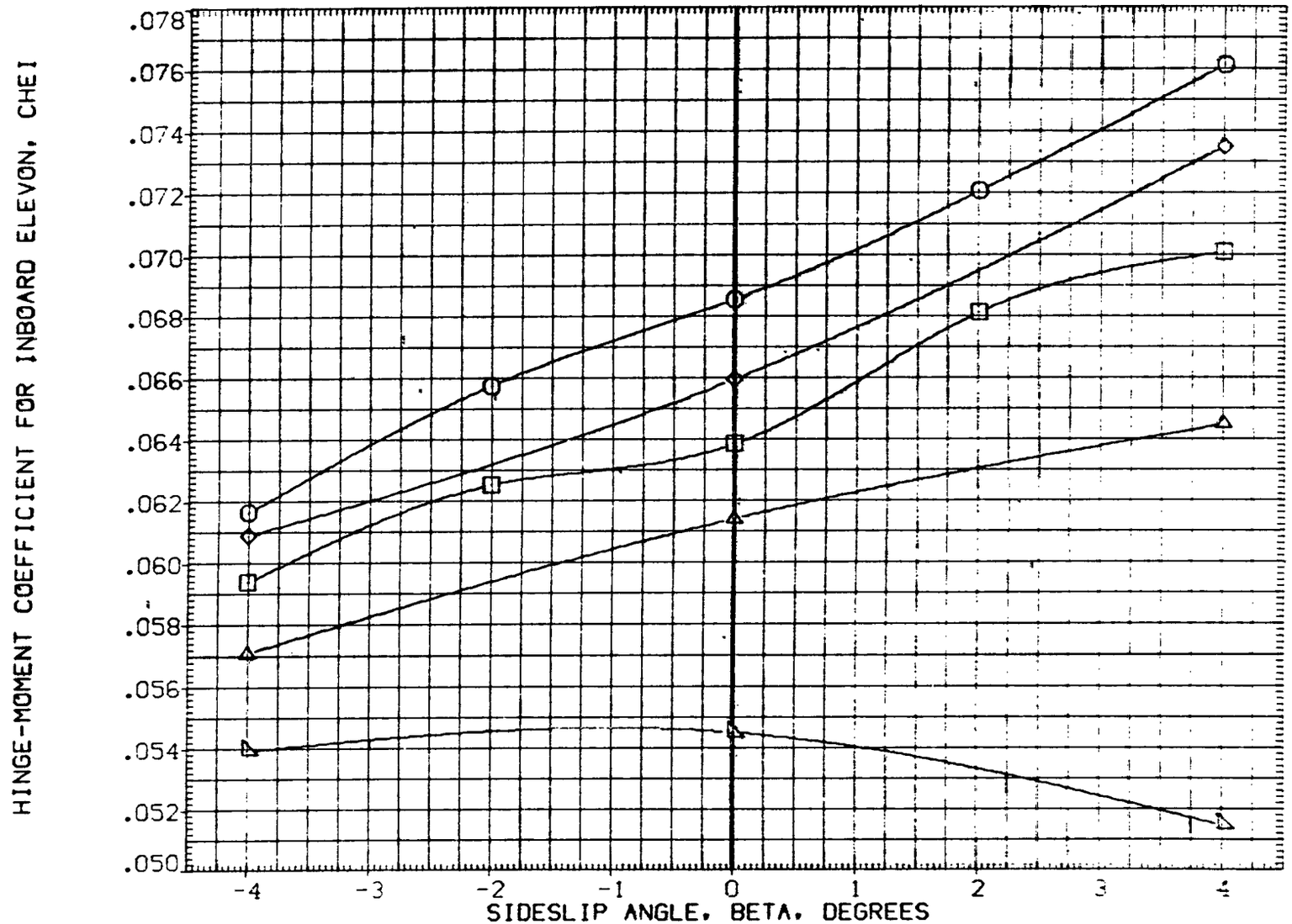


FIG.13 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN YAW, MACH = 1.55

(A)ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y28)	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(RE6Y30)	ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700
(RE6Y29)	ARC97-044-IIA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	1.550	30.700
(RE6Y31)	ARC97-044-IIA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	1.550	30.700
(RE6Y32)	ARC97-044-IIA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.1000	IN.
BREF	1290.1000	IN.
XMRP	979.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

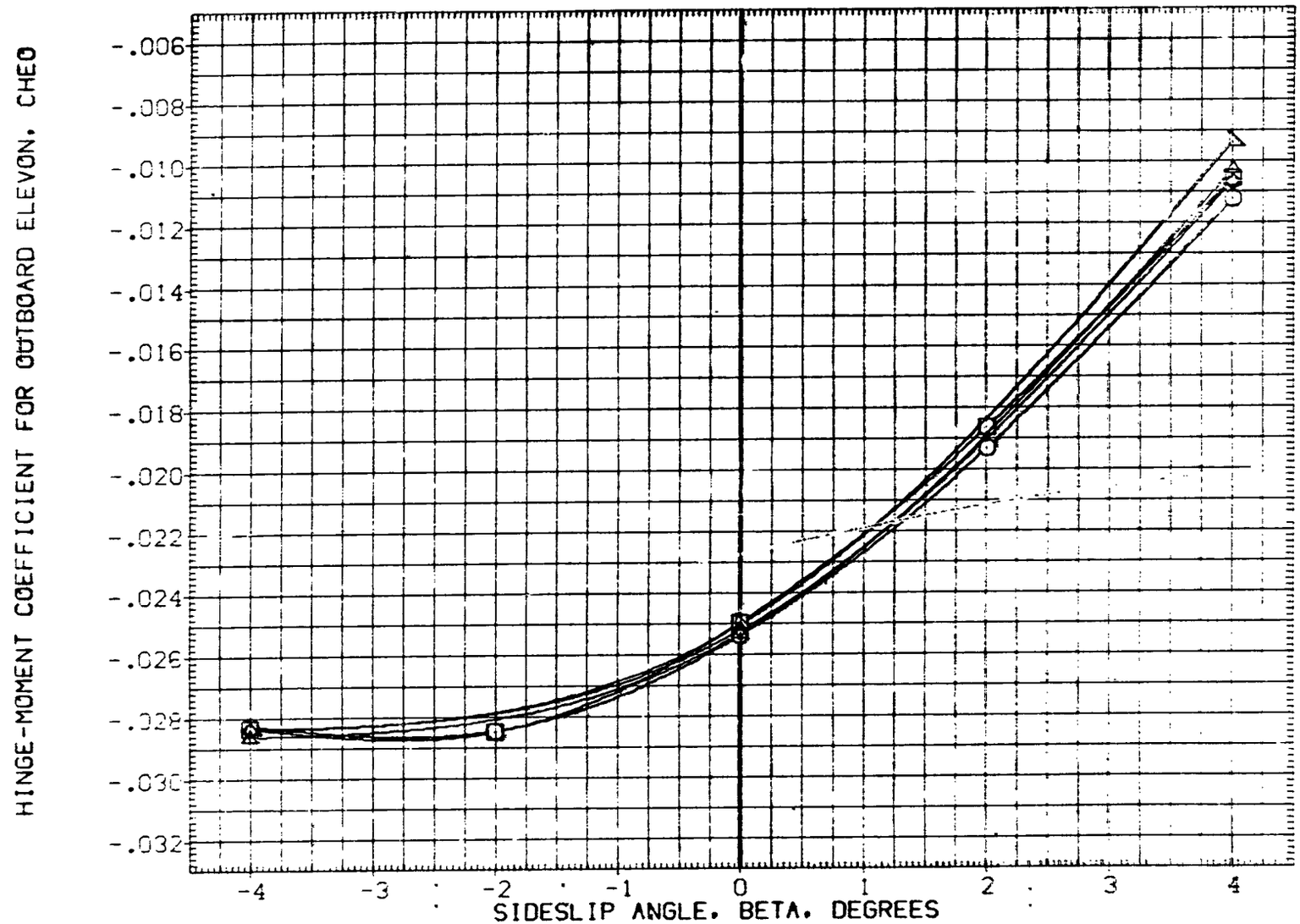


FIG.13 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN YAW, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		
(RE6,35)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700	SREF	2650.0000	SQ.FT.
(RE6,37)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700	LREF	1.0000	IN.
(RE6,36)		ARC97-044-1IA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	2.000	30.700	BREF	1980.0000	IN.
(RE6,38)		ARC97-044-1IA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	2.000	30.700	XMRP	875.0000	IN. XT
(RE6,39)		ARC97-044-1IA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	2.000	30.700	YMRP	.0000	IN. YT
								ZMRP	400.0000	IN. ZT
								SCALE	.0100	

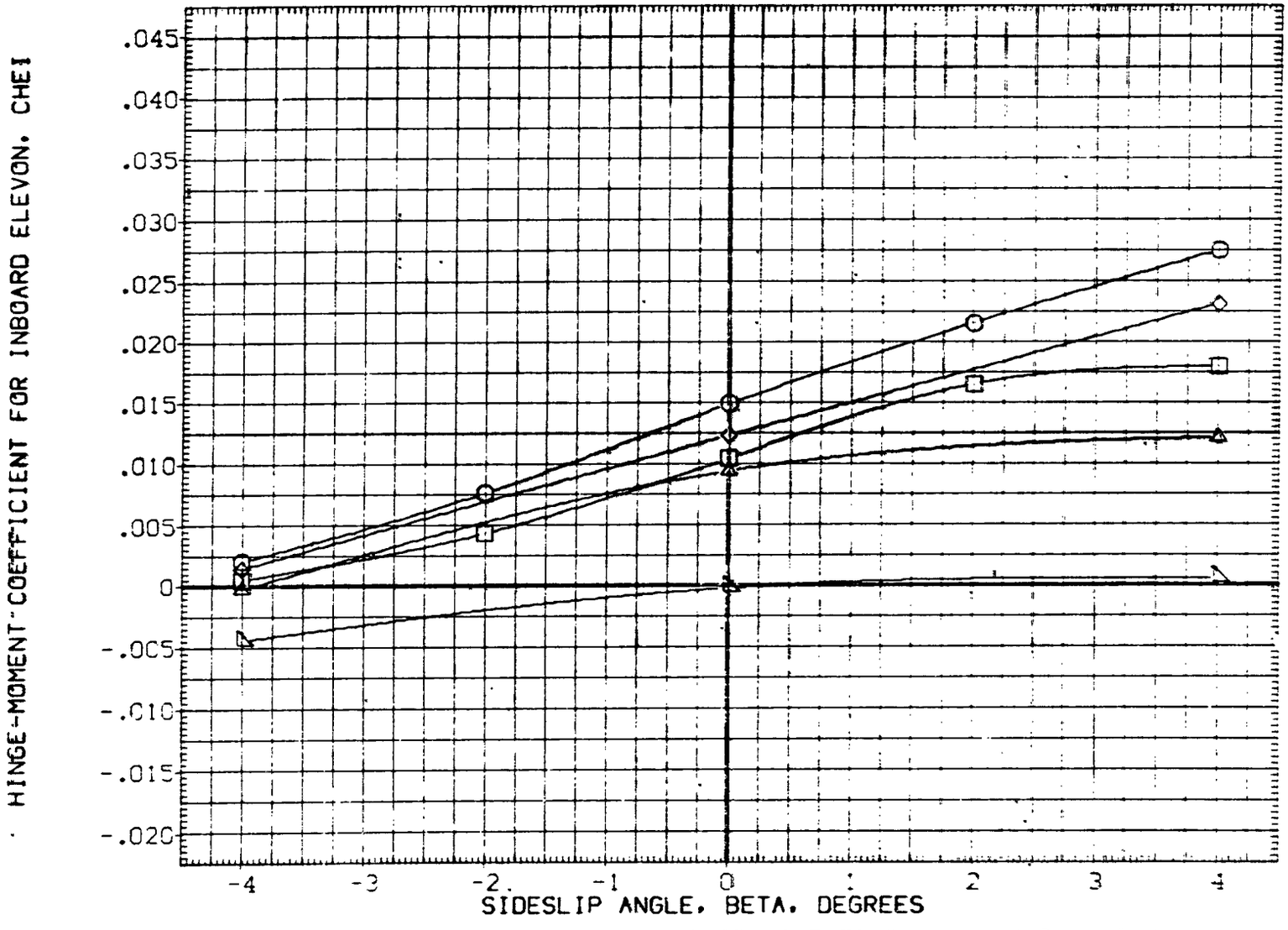


FIG.14 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN YAW, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
(RE6Y35)	□	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	[illegible]	[illegible]
(RE6Y37)	◇	ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	[illegible]	[illegible]
(RE6Y36)	△	ARC97-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.000	[illegible]	[illegible]
(RE6Y38)	▽	ARC97-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.000	[illegible]	[illegible]
(RE6Y39)	◁	ARC97-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.000	[illegible]	[illegible]

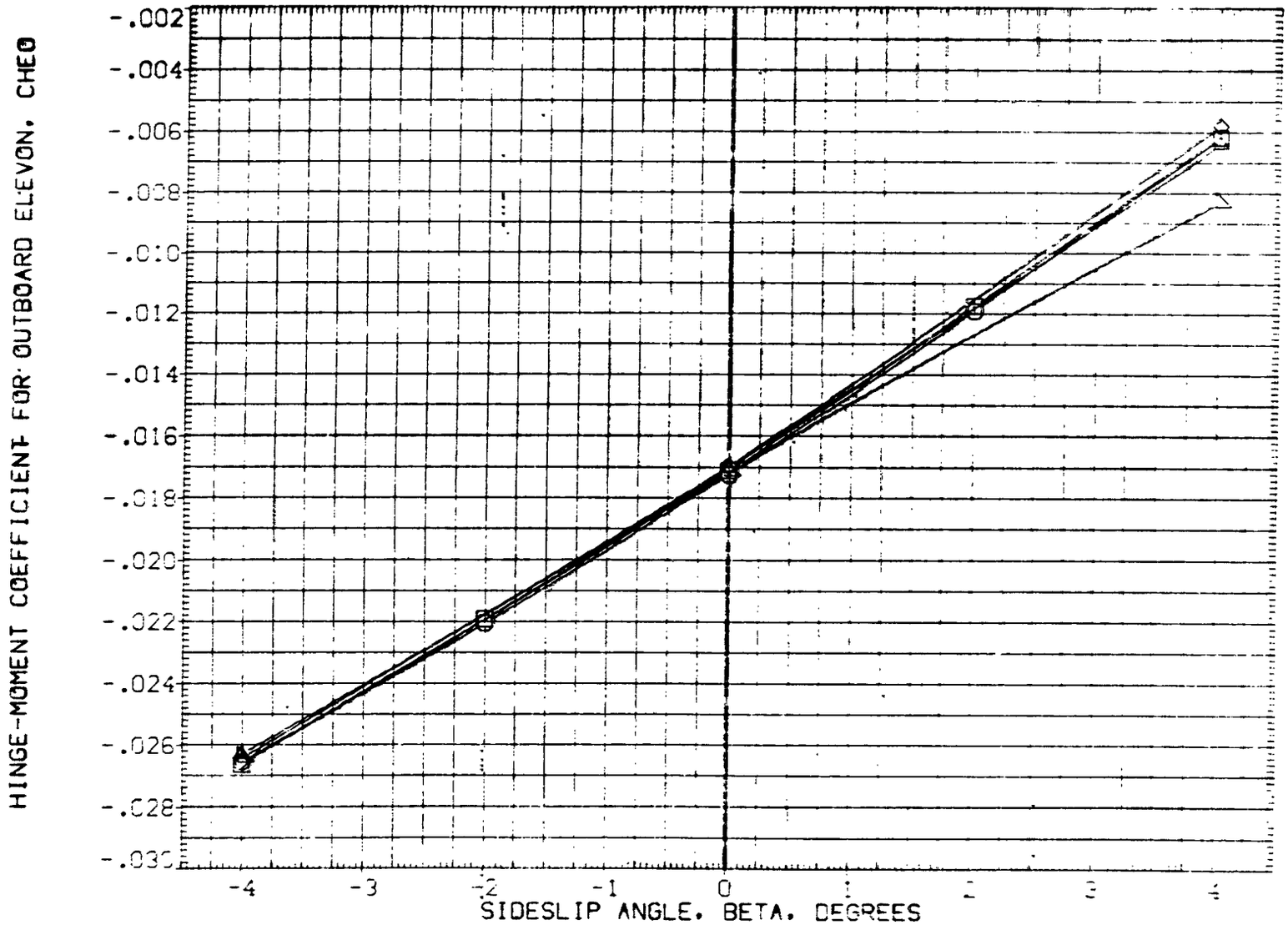


FIG.14 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN YAW, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y42)	DIXED	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6Y44)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6Y43)		ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700
(RE6Y45)		ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700
(RE6Y46)		ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	875.0000	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0100	

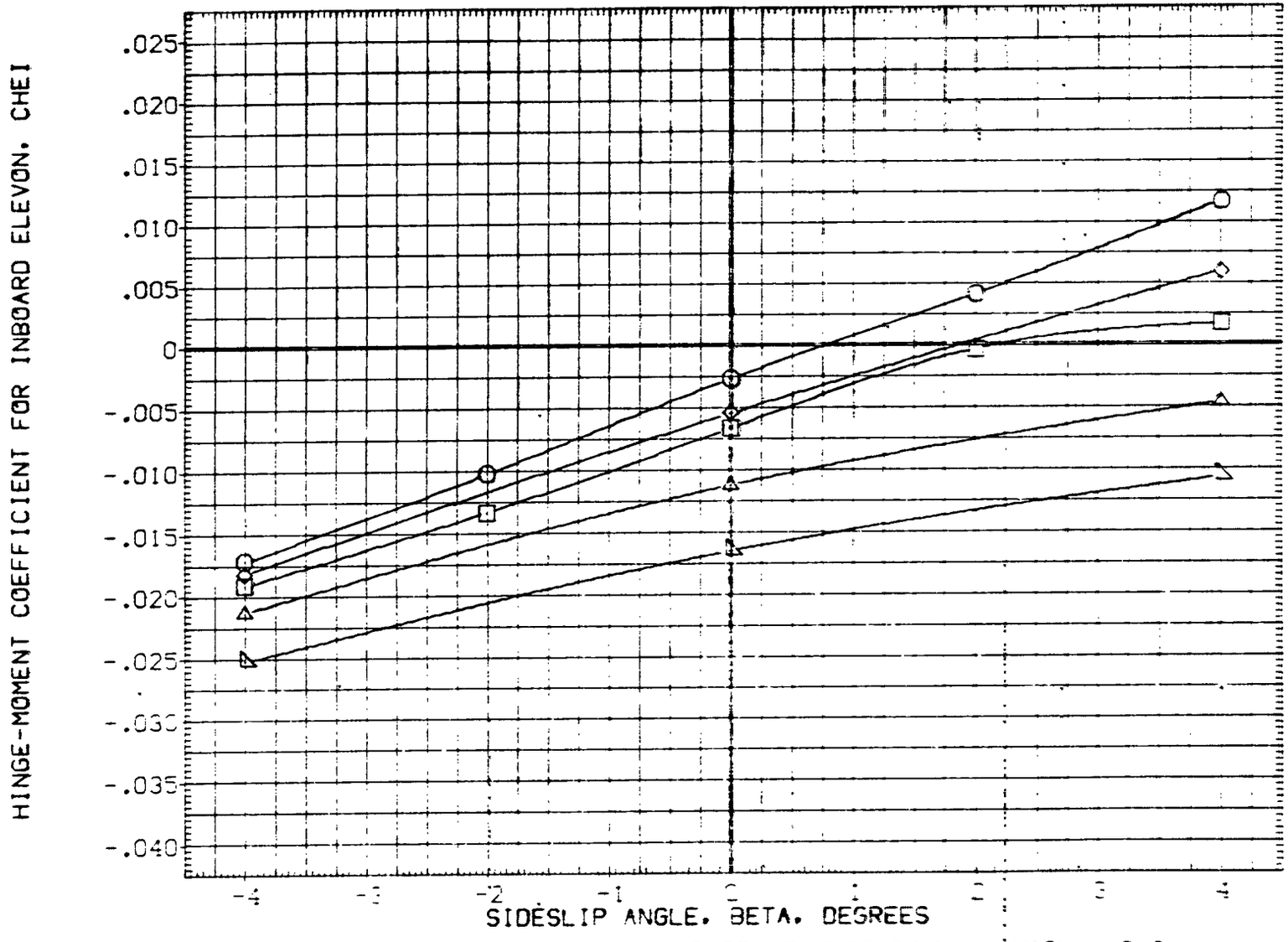


FIG.15 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN YAW, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
(RE6Y42)		ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700	SREF 2690.0000 SQ.FT.
(RE6Y44)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700	LREF [illegible]
(RE6Y43)		ARC97-044-1IA82B OTS(SRB=NOM- MPS=NOM)	.000	.000	2.200	30.700	BREF [illegible]
(RE6Y45)		ARC97-044-1IA82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	2.200	30.700	XMRP [illegible]
(RE6Y46)		ARC97-044-1IA82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	2.200	30.700	ZMRP [illegible]
							ZREF [illegible]
							SCALE [illegible]

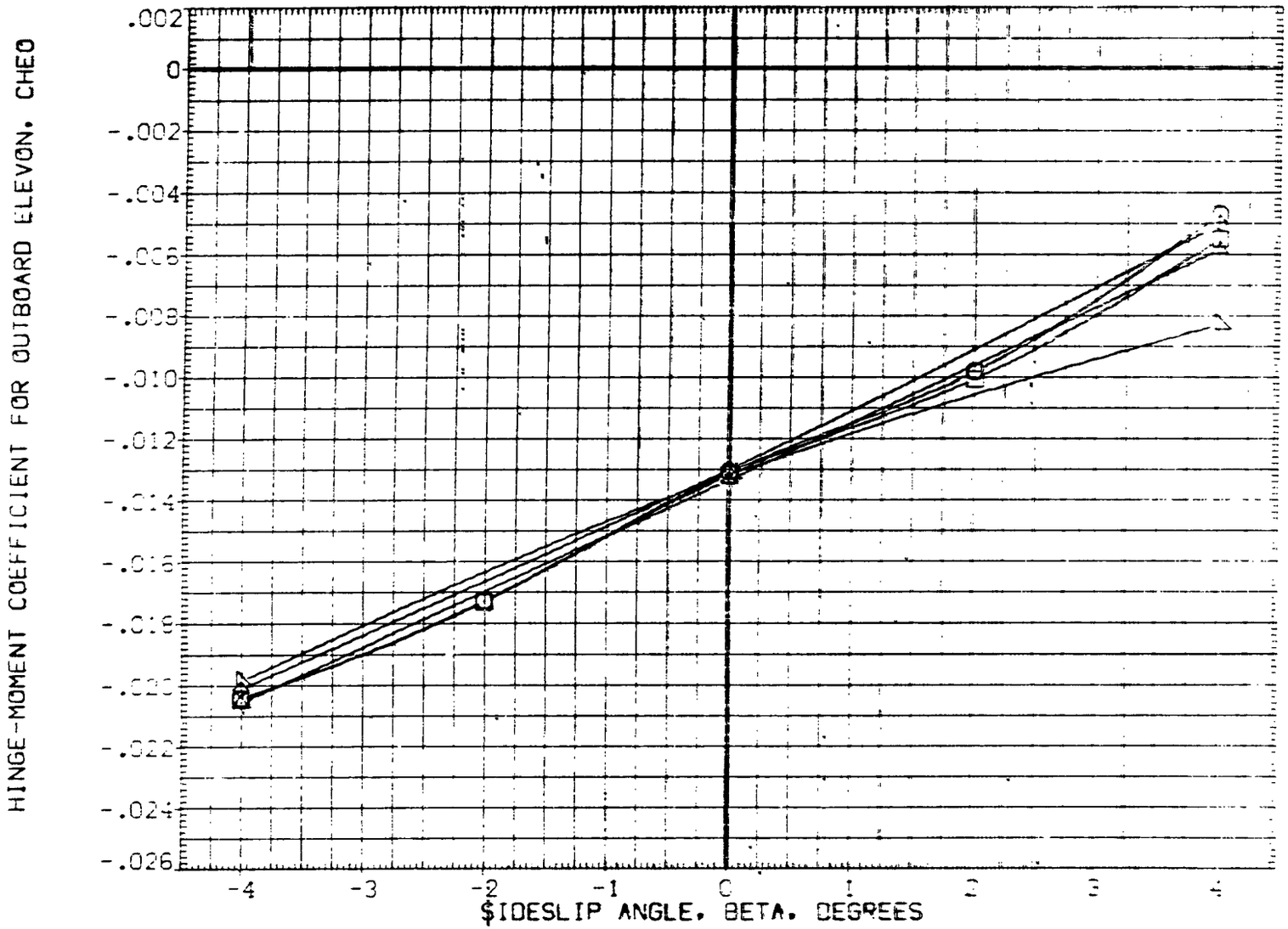


FIG.15 SRB PLUME SIZE EFFECT ON ELEVON HINGE MOMENTS IN YAW, MACH = 2.2

CA)ALPHA = .00

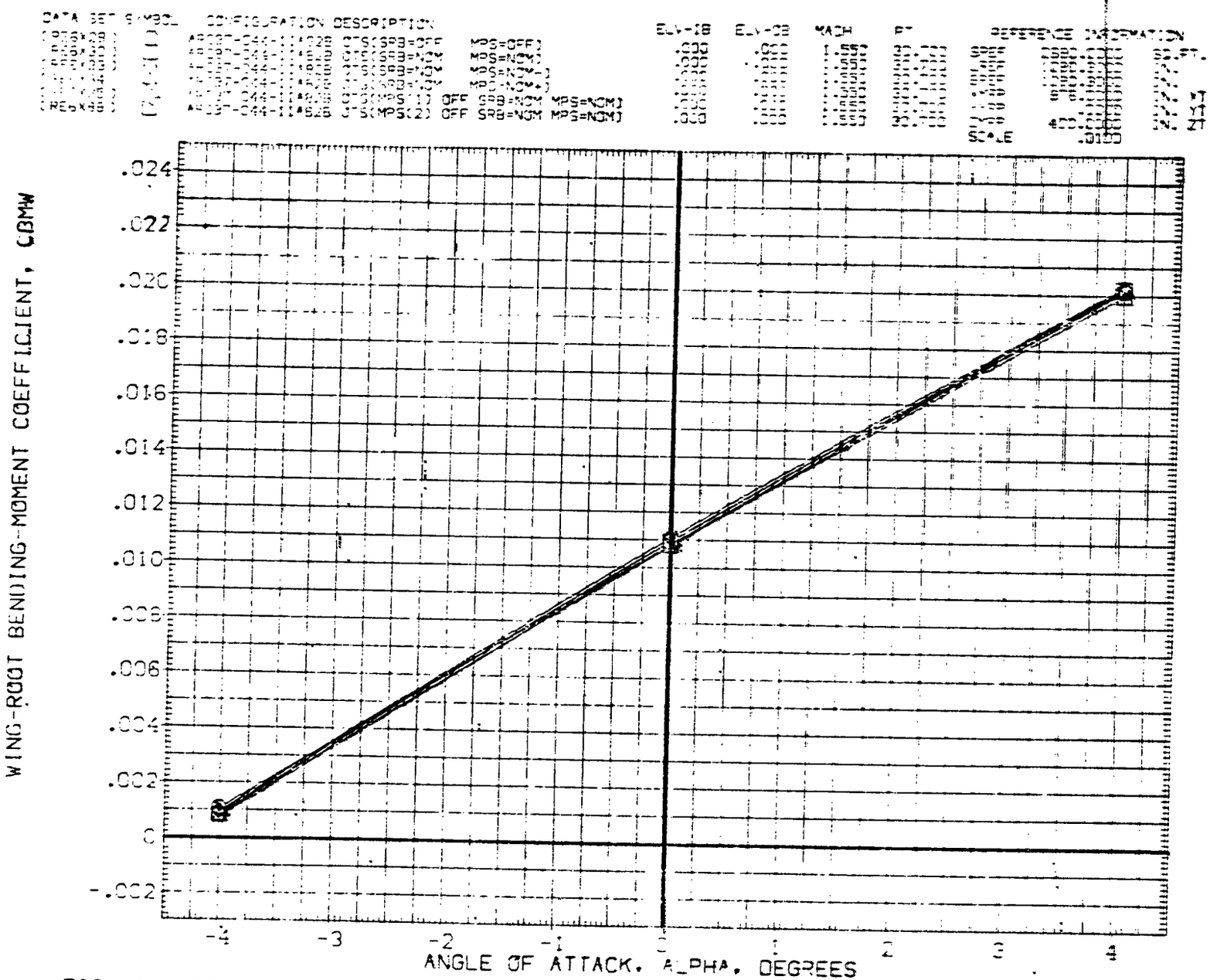


FIG.16 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=1.55

(BETA = .00

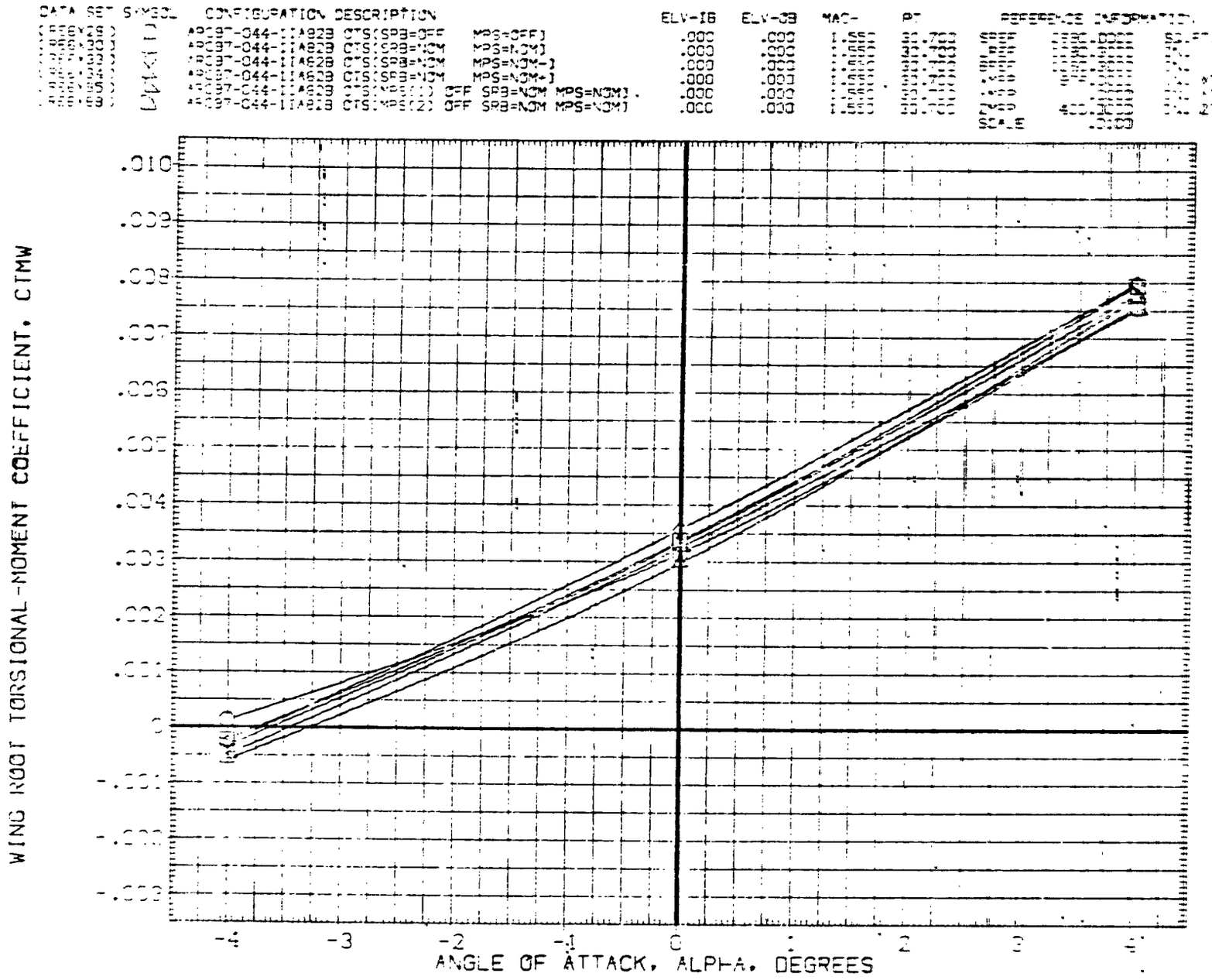


FIG.16 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	PT
(RE6X29)		AP097-044-11A828 OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RE6*30)		AP097-044-11A828 OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6*33)		AP097-044-11A828 OTS(SRB=NOM MPS=NOM-)	.000	.000	1.550	30.700
(RE6*34)		AP097-044-11A828 OTS(SRB=NOM MPS=NOM+)	.000	.000	1.550	30.700
(RE6*85)		AP097-044-11A828 OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6*88)		AP097-044-11A828 OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1200.0000	IN.
BREF	1200.0000	IN.
XMRP	970.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

WING NORMAL-FORCE COEFFICIENT, CNW

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-4 -3 -2 -1 0 1 2 3 4

ANGLE OF ATTACK, ALPHA, DEGREES

FIG.16 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=1.55

CASBETA = .00

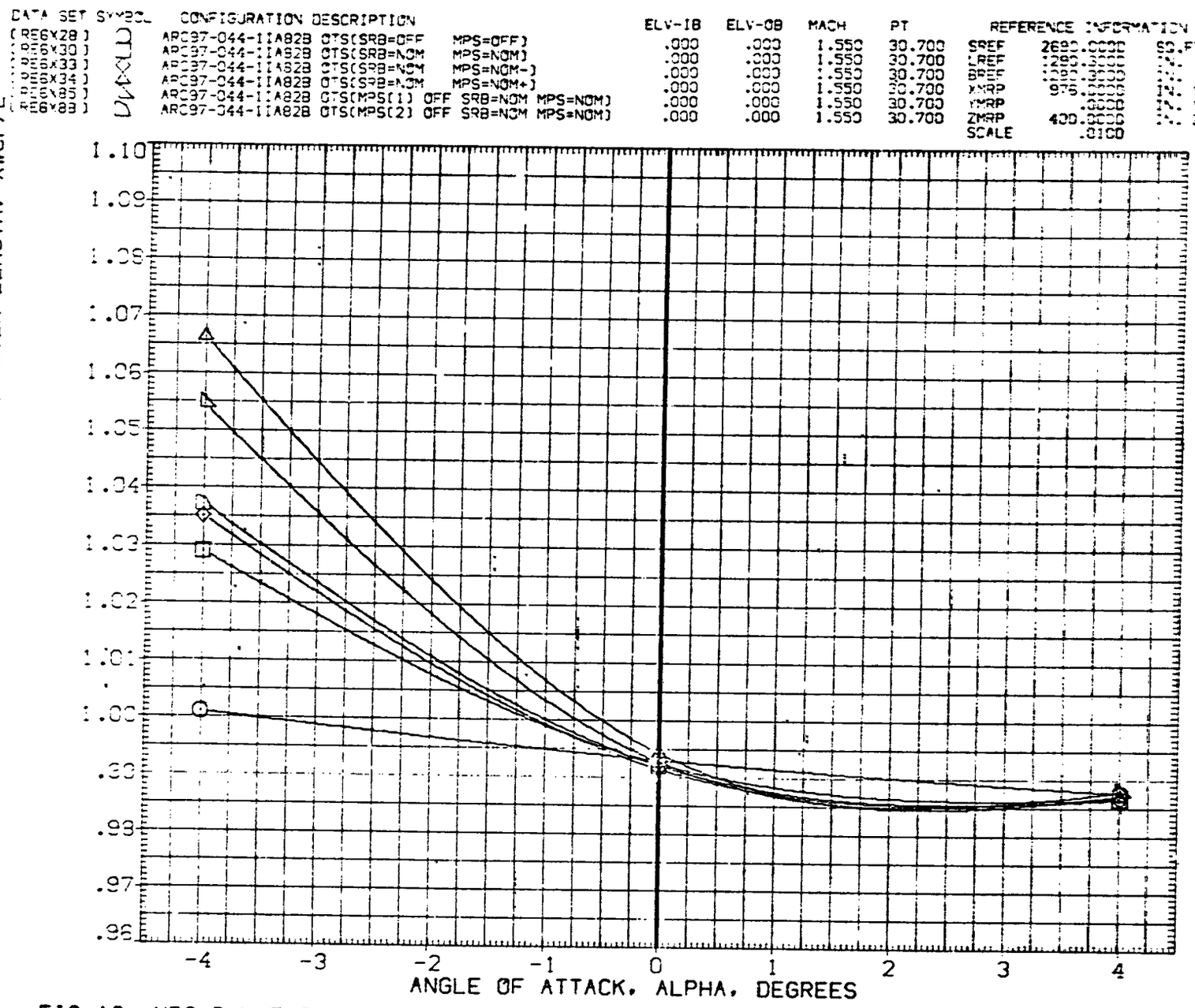


FIG.16 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(REVISED)		AR097-044-11A828 OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
		AR097-044-11A828 OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
		AR097-044-11A828 OTS(SRB=NOM MPS=NOM-)	.000	.000	1.550	30.700
		AR097-044-11A828 OTS(SRB=NOM MPS=NOM+)	.000	.000	1.550	30.700
		AR097-044-11A828 OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
		AR097-044-11A828 OTS(MPS.2) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

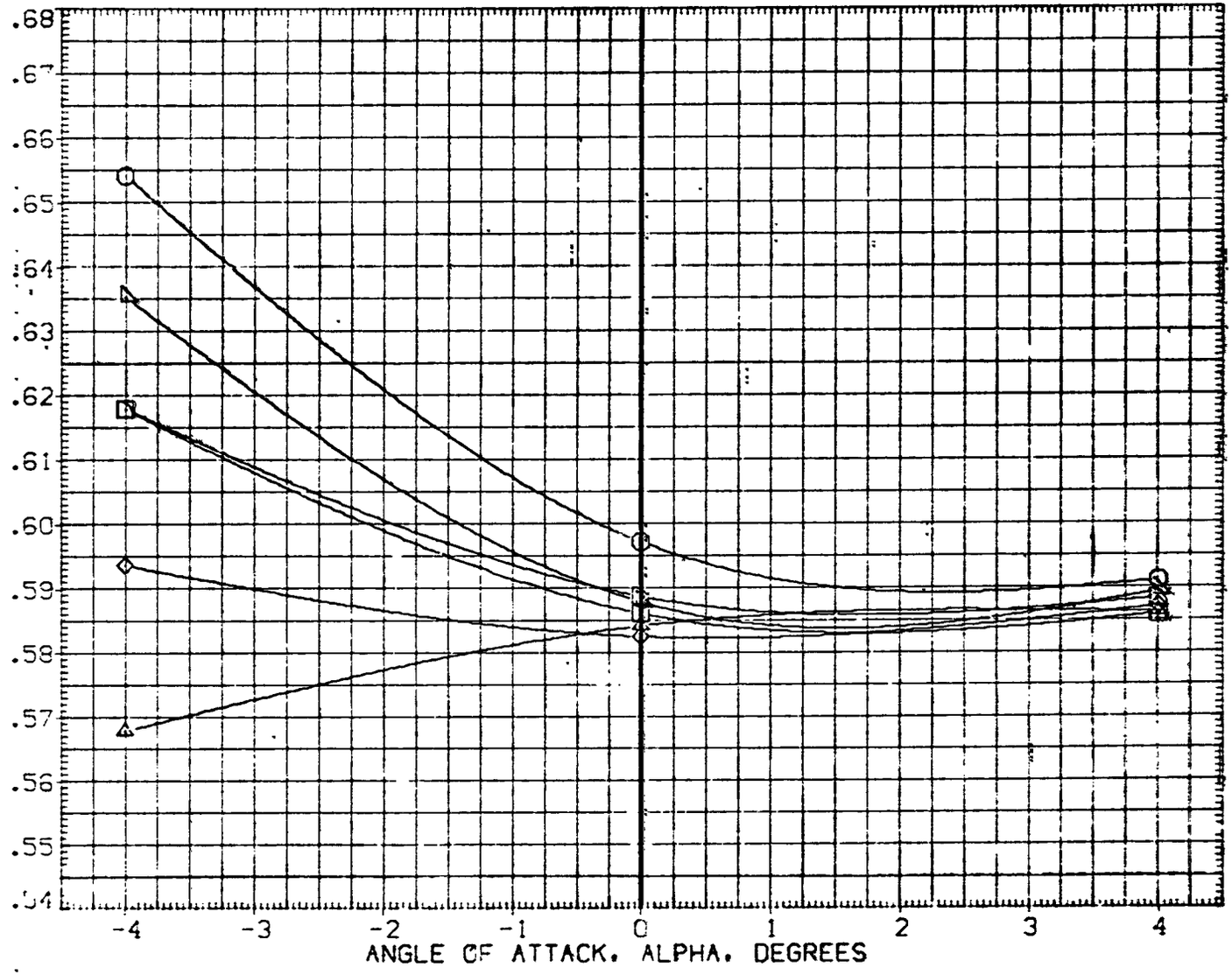


FIG.16 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6x35)	□	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6x37)	⊠	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6x40)	△	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.000	30.700
(RE6x41)	◇	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700
(RE6x86)	▽	ARC97-044-IIA82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6x89)	⊕	ARC97-044-IIA82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1055.3000	IN.
BREF	1293.2600	IN.
XMRP	996.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	410.0000	IN. ZT
SCALE	.0100	

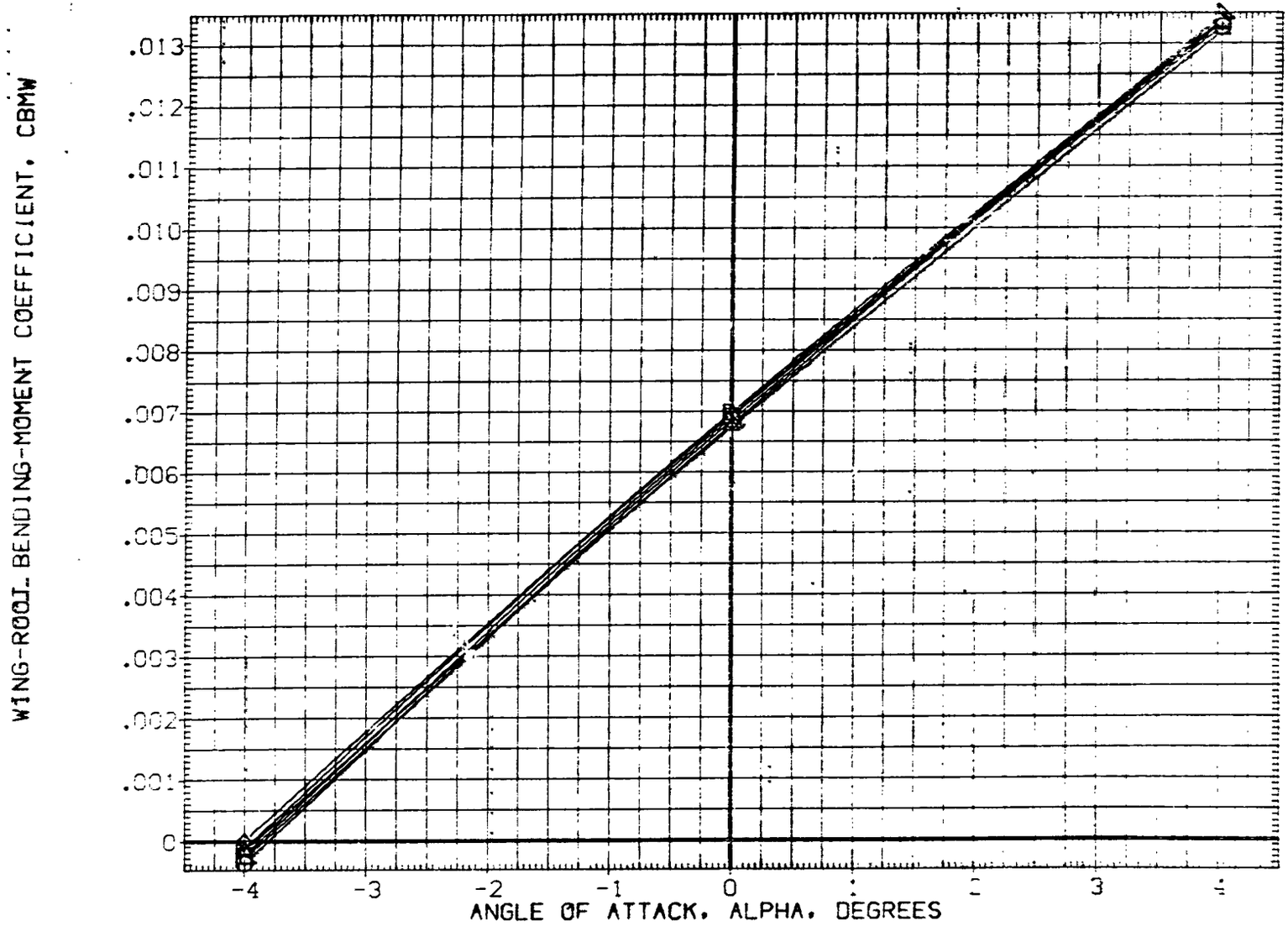


FIG.17 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH = 2.0

(A)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		
(RE6X35)	AR097-044-11A92B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700	SREF	2690.0000	SQ.FT.
(RE6X37)	AR097-044-11A92B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	LREF	1280.3000	IN.
(RE6X40)	AR097-044-11A92B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.000	30.700	BREF	1280.3000	IN.
(RE6X41)	AR097-044-11A92B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700	XMRP	976.0000	IN. XT
(RE6X86)	AR097-044-11A92B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	YMRP	.0000	IN. YT
(PE6X89)	AR097-044-11A92B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	ZMRP	400.0000	IN. ZT
						SCALE	.0100	

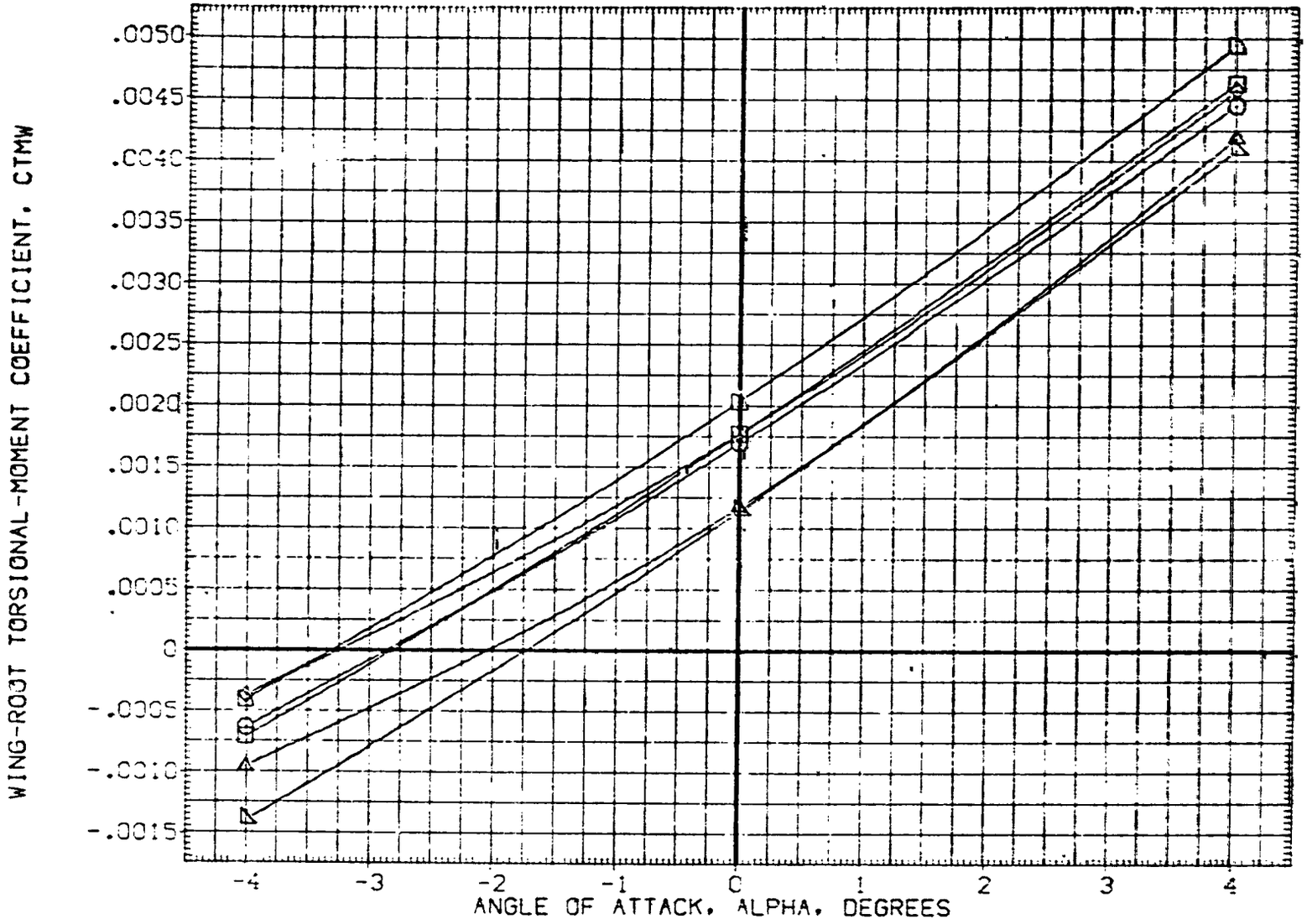


FIG.17 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)		ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)		ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X40)		ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.000	30.700
(RE6X41)		ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700
(RE6X86)		ARC97-044-IIA82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X89)		ARC97-044-IIA82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

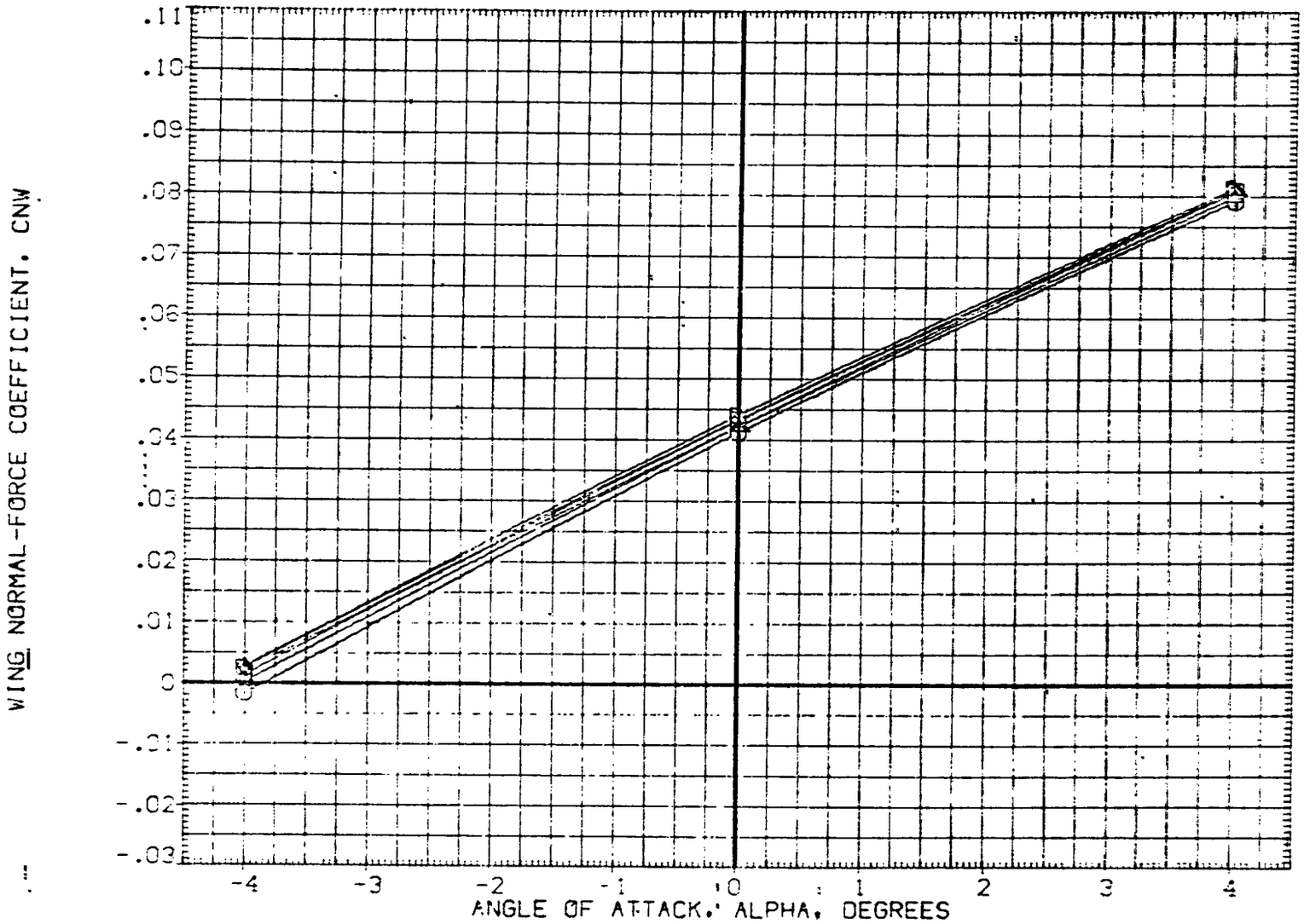


FIG.17 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)		ARC97-044-11A828 OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)		ARC97-044-11A828 OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X40)		ARC97-044-11A828 OTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700
(RE6X41)		ARC97-044-11A828 OTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700
(RE6X86)		ARC97-044-11A828 OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X89)		ARC97-044-11A828 OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

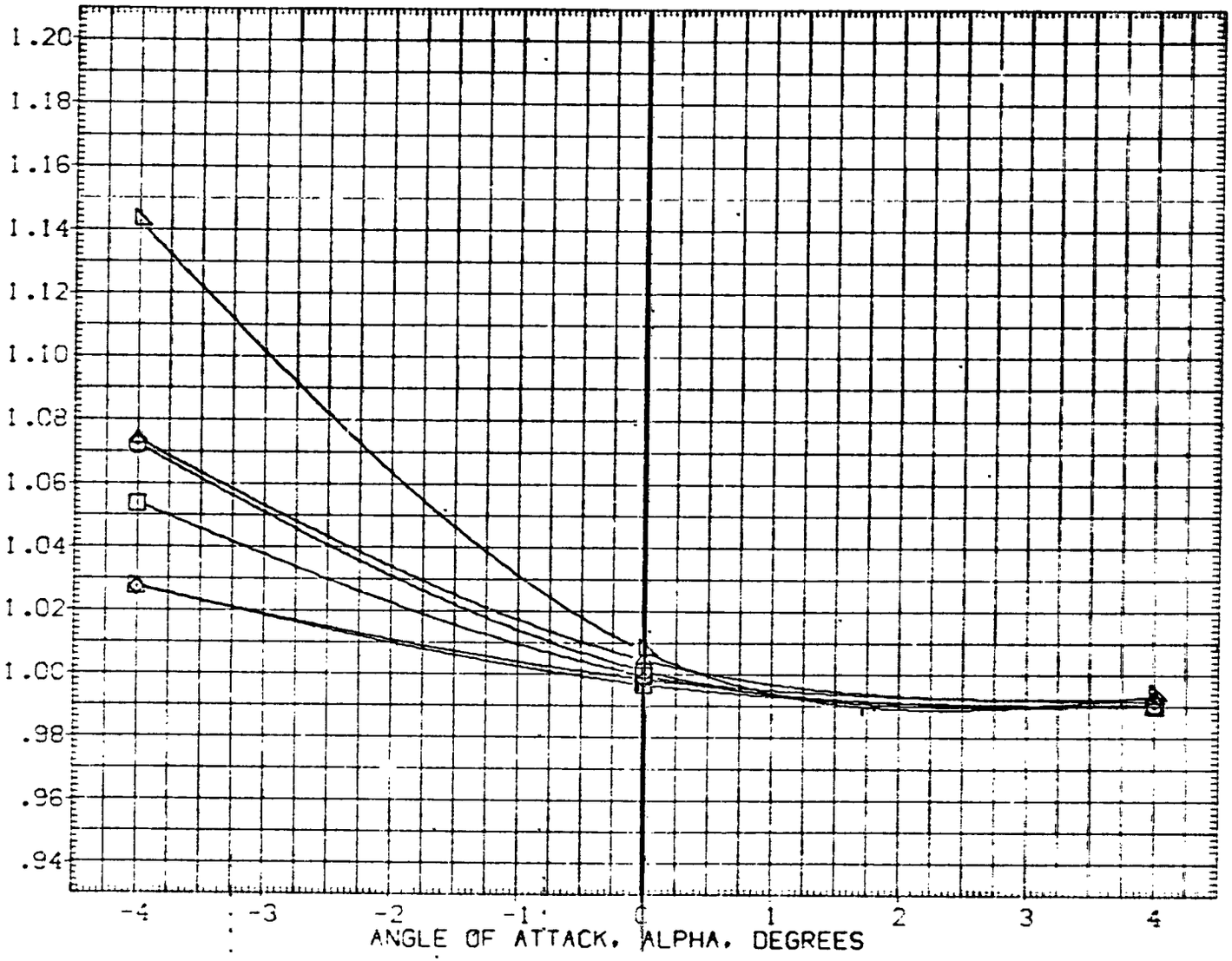


FIG.17 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)	◇	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X37)	□	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X40)	△	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.000	30.700
(RE6X41)	▽	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700
(RE6X86)	⊲	ARC97-044-IIA82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X89)	⊳	ARC97-044-IIA82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YB
ZMRP	400.0000	IN. ZT
SCALE	.0100	

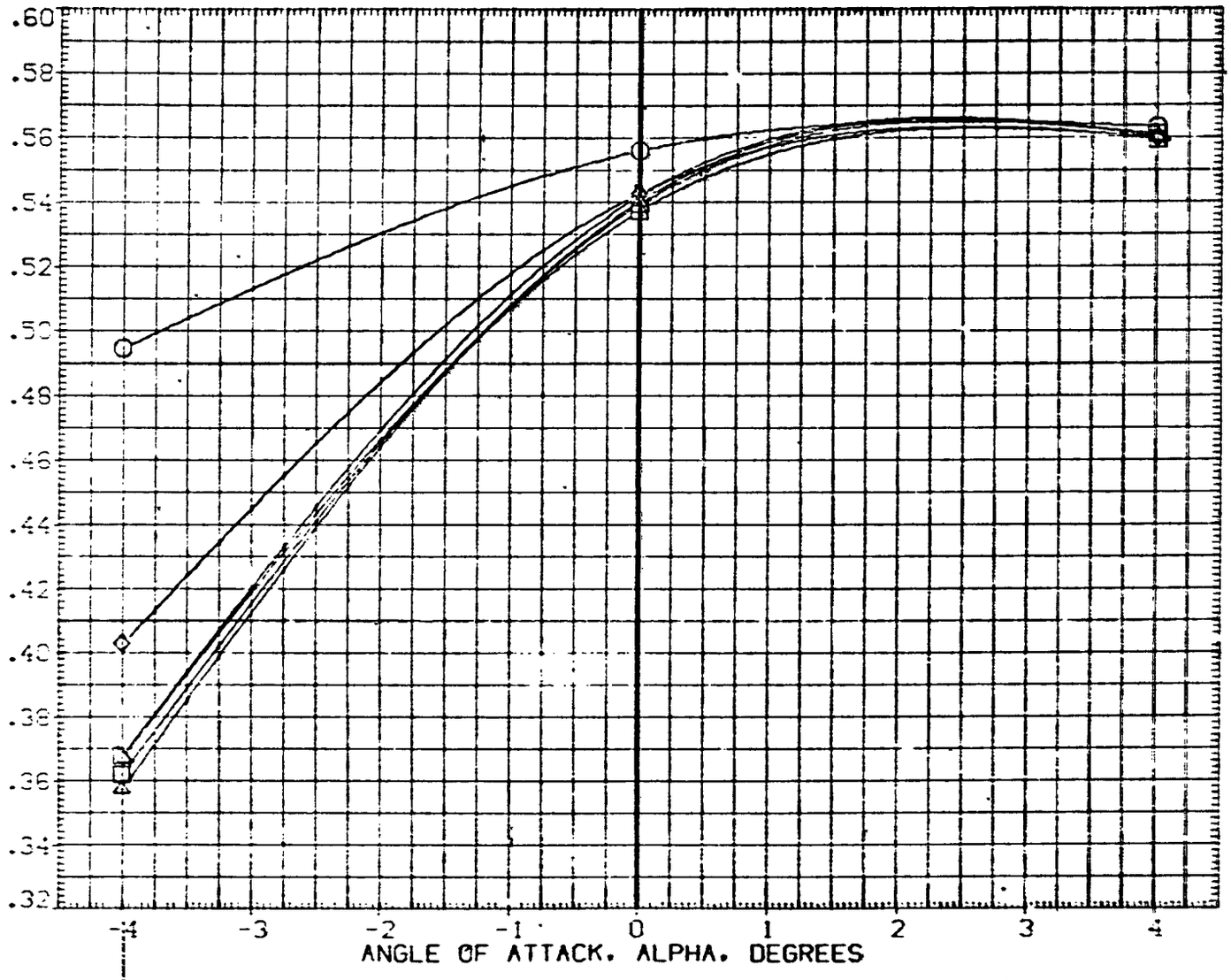


FIG.17 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X42)	D(14.0)	AR097-044-11A828 OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6X44)		AR097-044-11A828 OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X47)		AR097-044-11A828 OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700
(RE6X48)		AR097-044-11A828 OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700
(RE6X87)		AR097-044-11A828 OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X90)		AR097-044-11A828 OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2680.0000	SQ.FT.
LREF	1280.3000	IN.
BREF	1280.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

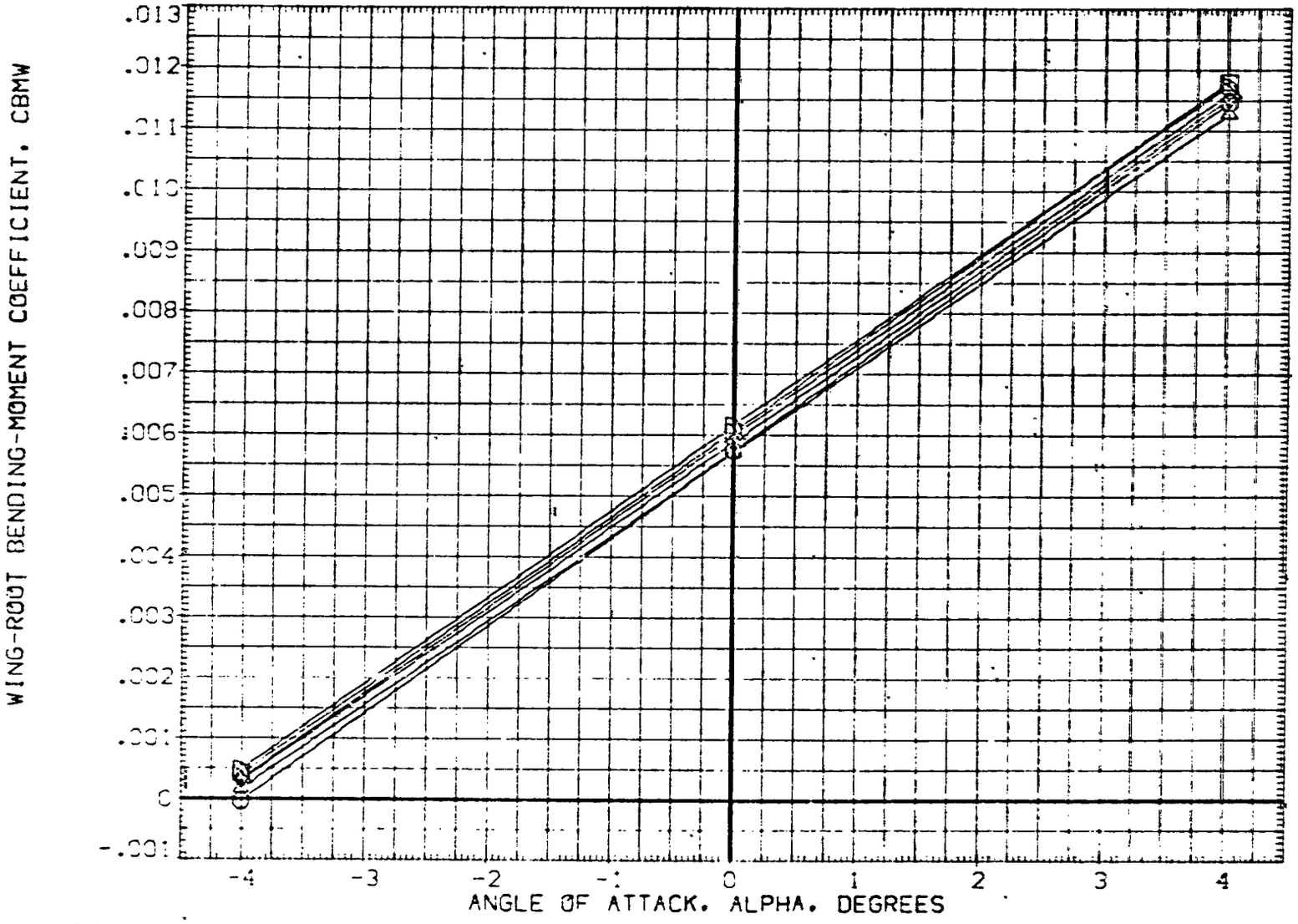


FIG.18 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X42)	□	ARC97-044-II-A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6X44)	◇	ARC97-044-II-A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X47)	△	ARC97-044-II-A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700
(RE6X48)		ARC97-044-II-A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700
(RE6X67)		ARC97-044-II-A82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X70)		ARC97-044-II-A82B OTS(MPS(2) OFF SRB NOM MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. WT
YMRP		IN. WT
ZMRP	400.0000	IN. WT
SCALE	.0100	

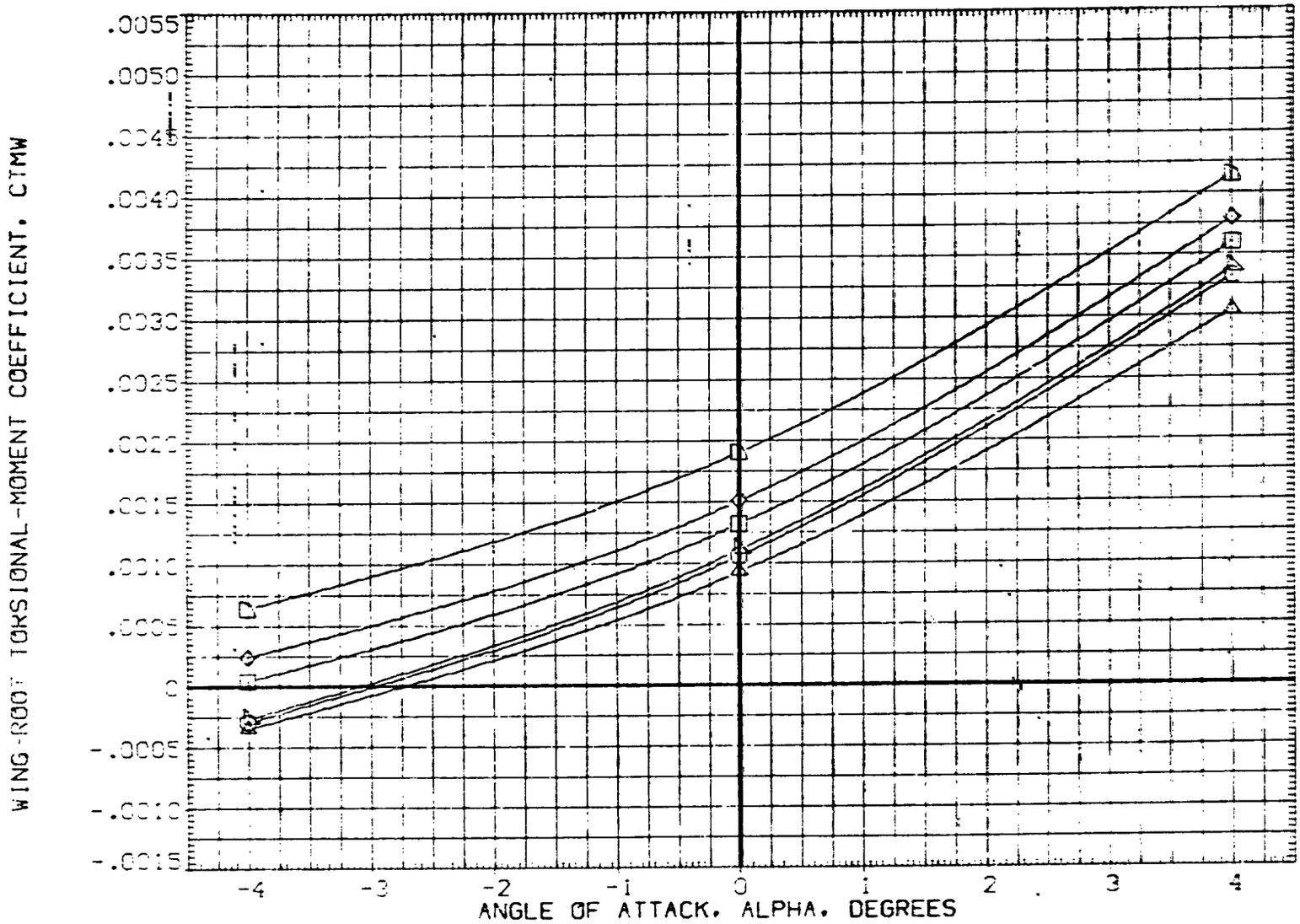


FIG.18 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(REGX42)		APC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(REGX44)		APC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(REGX47)		APC97-044-11A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700
(REGX48)		APC97-044-11A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700
(REGX87)		APC97-044-11A82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(REGX90)		APC97-044-11A82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2890.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1090.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

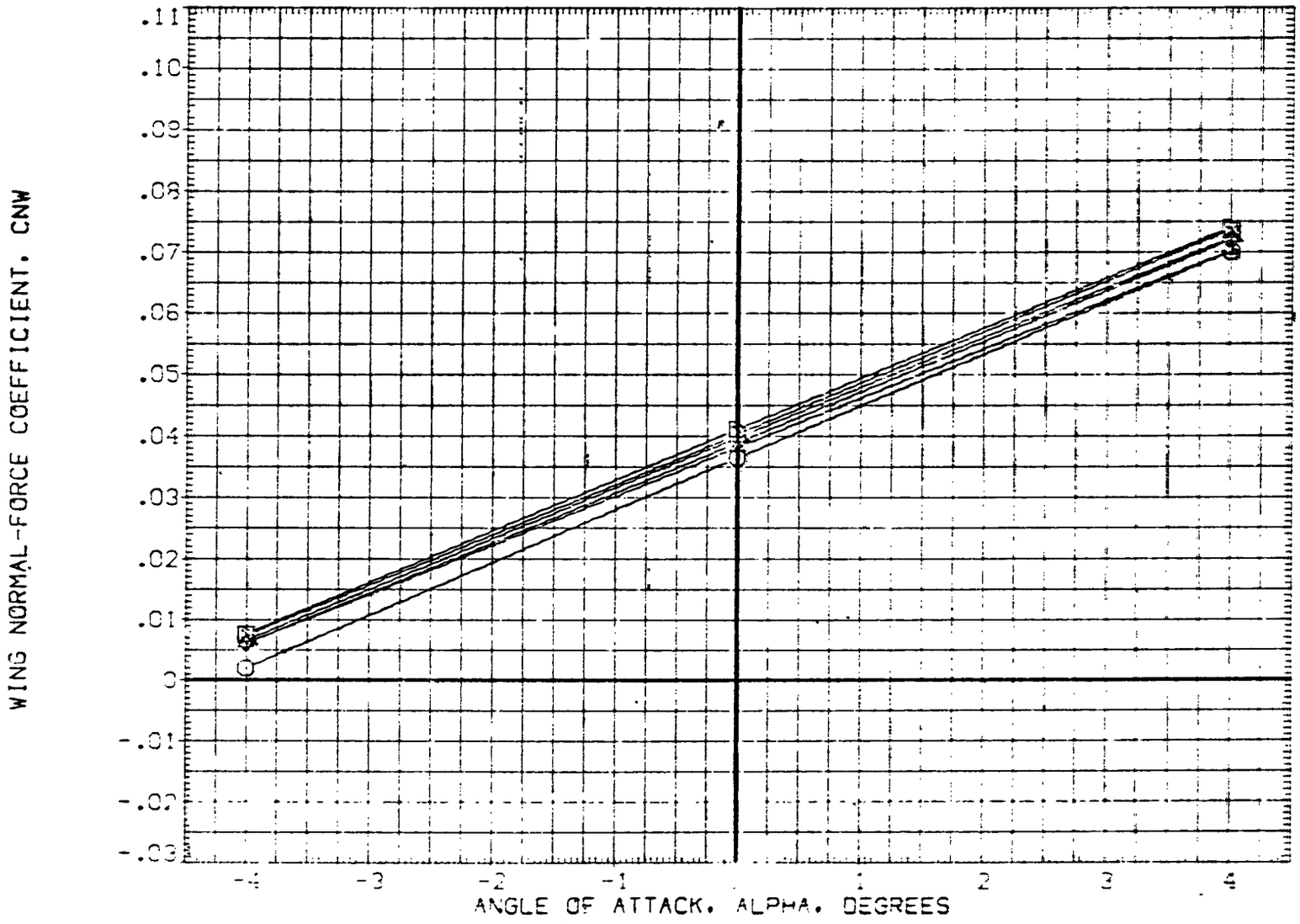


FIG.18 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.2

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6742)	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6744)	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6743)	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700
(RE6745)	ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700
(RE6746)	ARC97-044-IIA92B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6747)	ARC97-044-IIA92B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION

SREF 2963.0000 SQ.FT.
LREF 1162.8000 FT.
BREF 1261.0000 FT.
XMRP 975.0000 FT.
ZMRP 402.0000 FT.
SCALE .0010

WING CENTER-OF-PRESSURE, LONGITUDINAL LOCATION, OVER LENGTH, XWCP/L (D)

1.040
1.035
1.030
1.025
1.020
1.015
1.010
1.005
1.000
.995
.990
.985
.980
.975

-4 -3 -2 -1 0 1 2 3 4

ANGLE OF ATTACK, ALPHA, DEGREES

FIG.18 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.2

CA BETA = .00

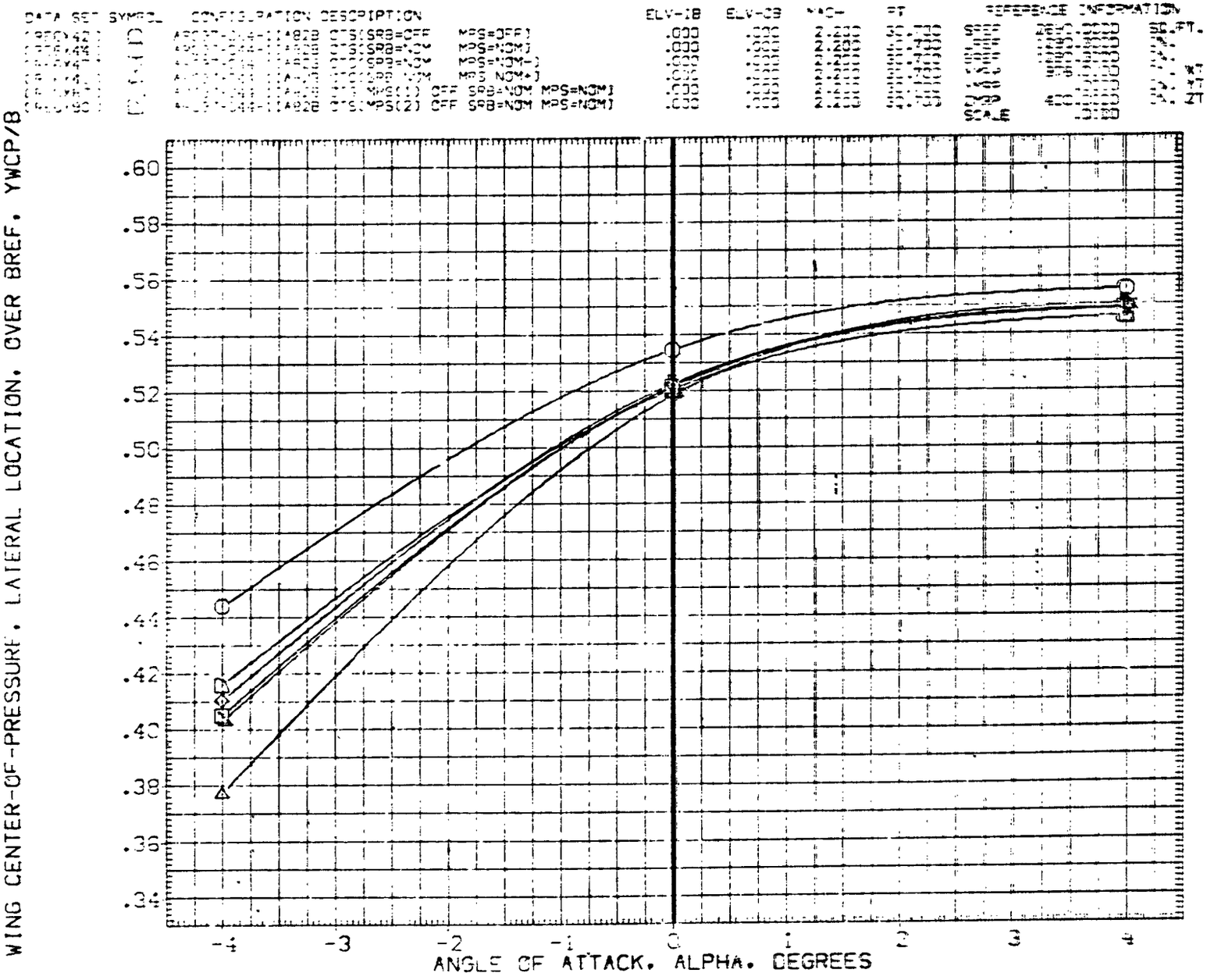


FIG.18 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN PITCH, MACH=2.2

(A)BETA = .00

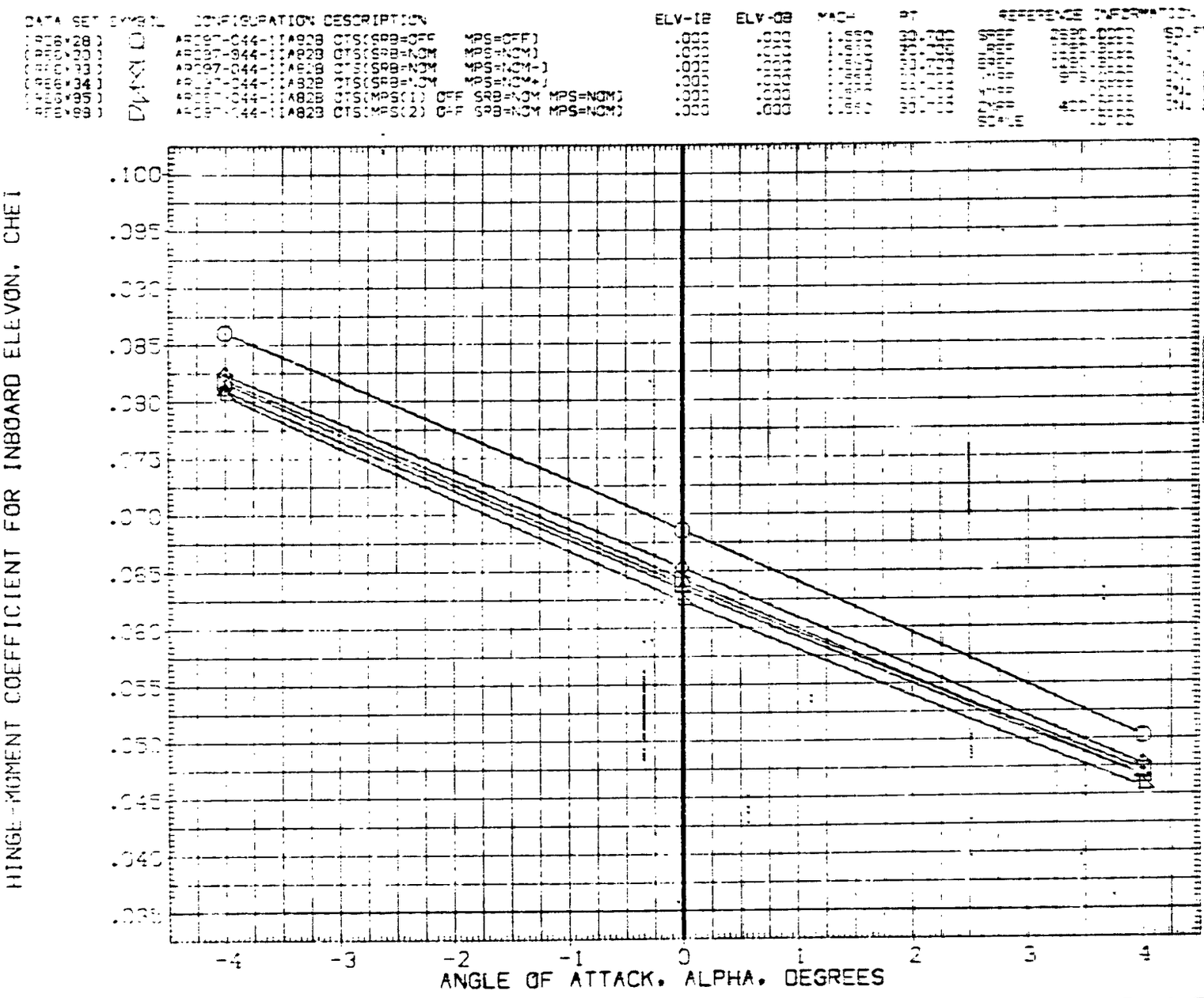


FIG.19 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN PITCH, MACH=1.55

CA/BETA = .00

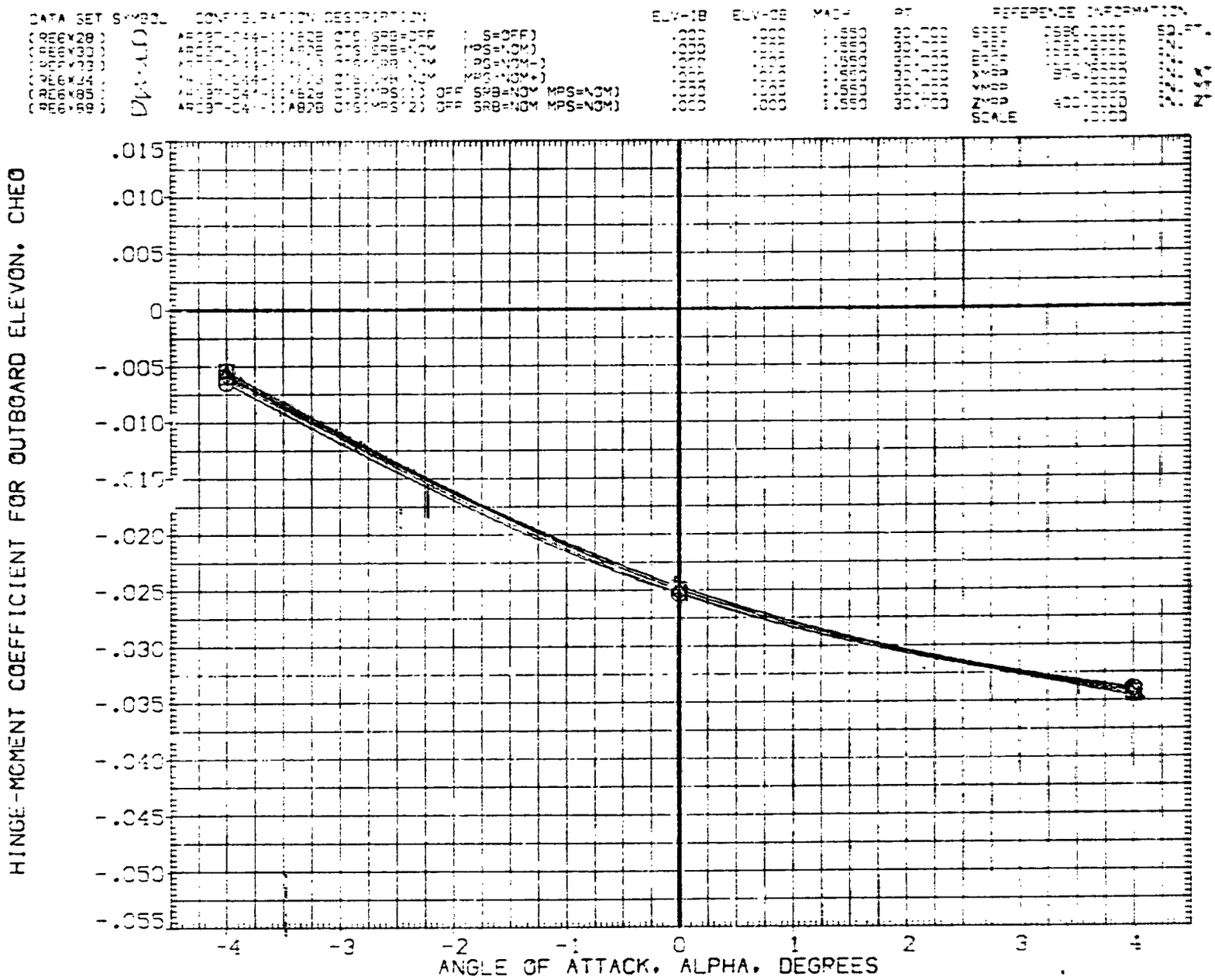


FIG.13 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN PITCH, MACH=1.55

ALBETA = .00

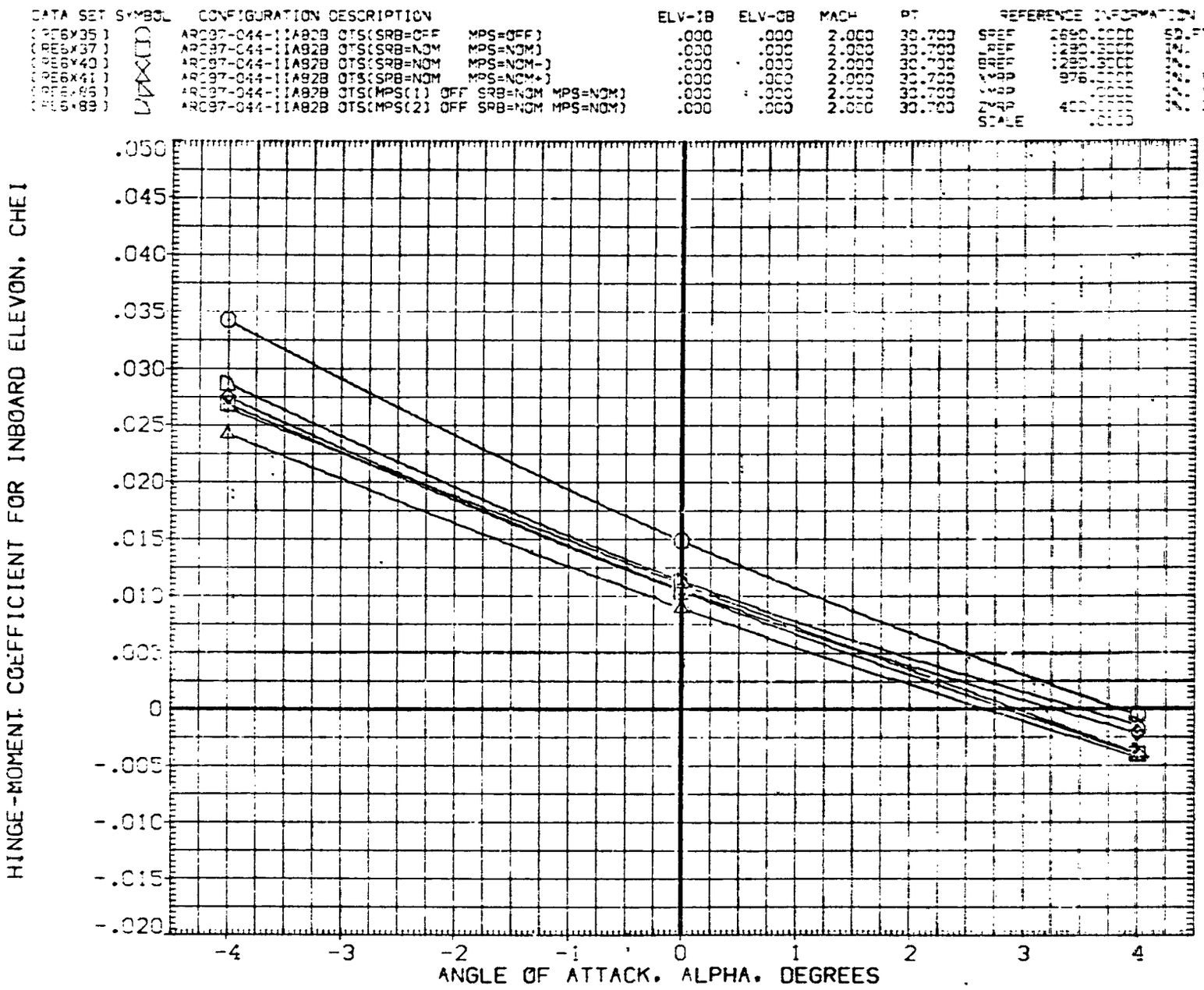


FIG.20 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN PITCH, MACH=2.0

CA(BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)		ARC37-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X40)		ARC37-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X41)		ARC37-044-11A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.000	30.700
(RE6X42)		ARC37-044-11A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700
(RE6X66)		ARC37-044-11A82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X89)		ARC37-044-11A82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

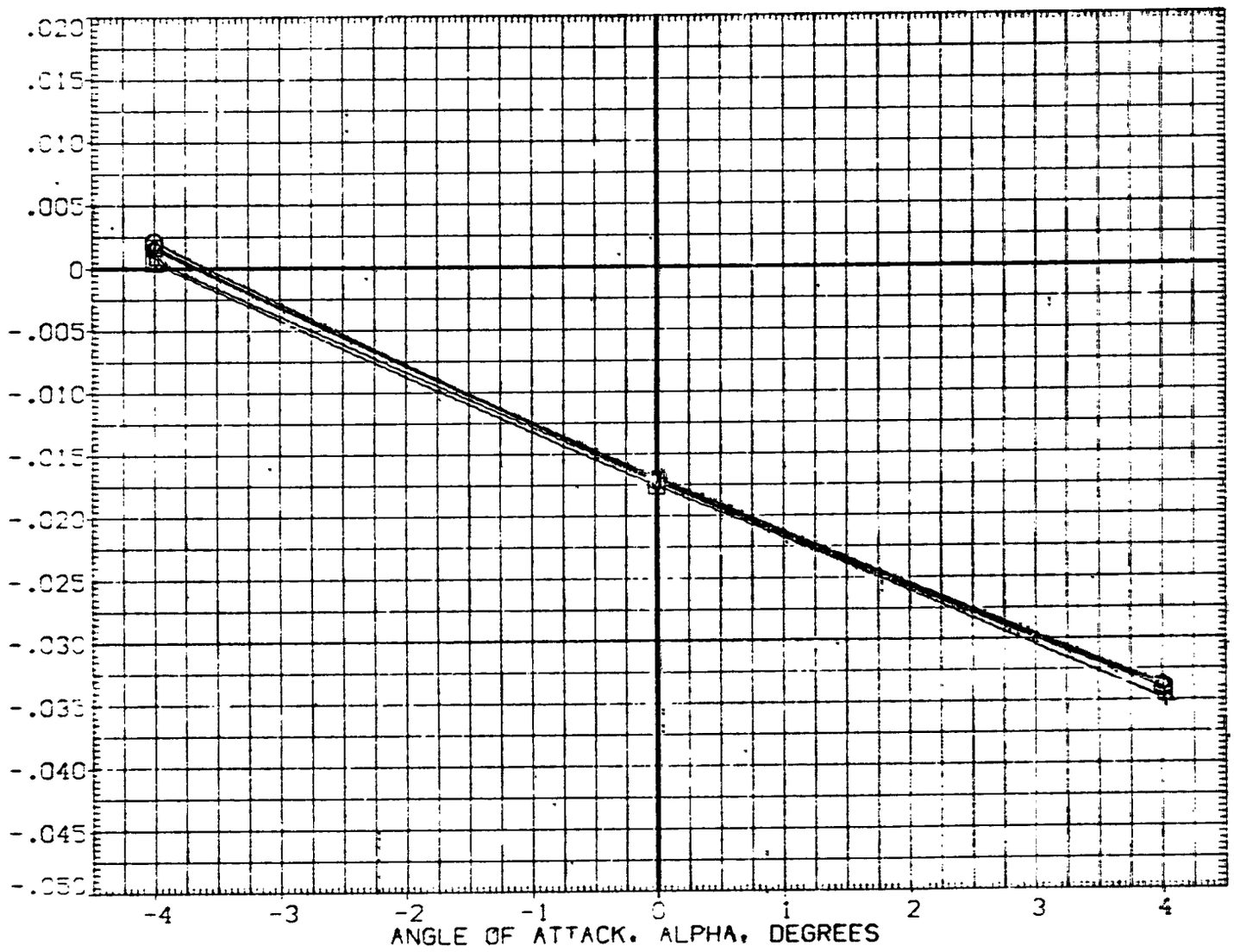


FIG.20 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN PITCH, MACH=2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X42)		AR097-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6X44)		AR097-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X47)		AR097-044-11A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700
(RE6X49)		AR097-044-11A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700
(RE6X27)		AR097-044-11A82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6X30)		AR097-044-11A82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2590.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. WT
YMRP	.0000	IN. WT
ZMRP	400.0000	IN. WT
SCALE	.0100	

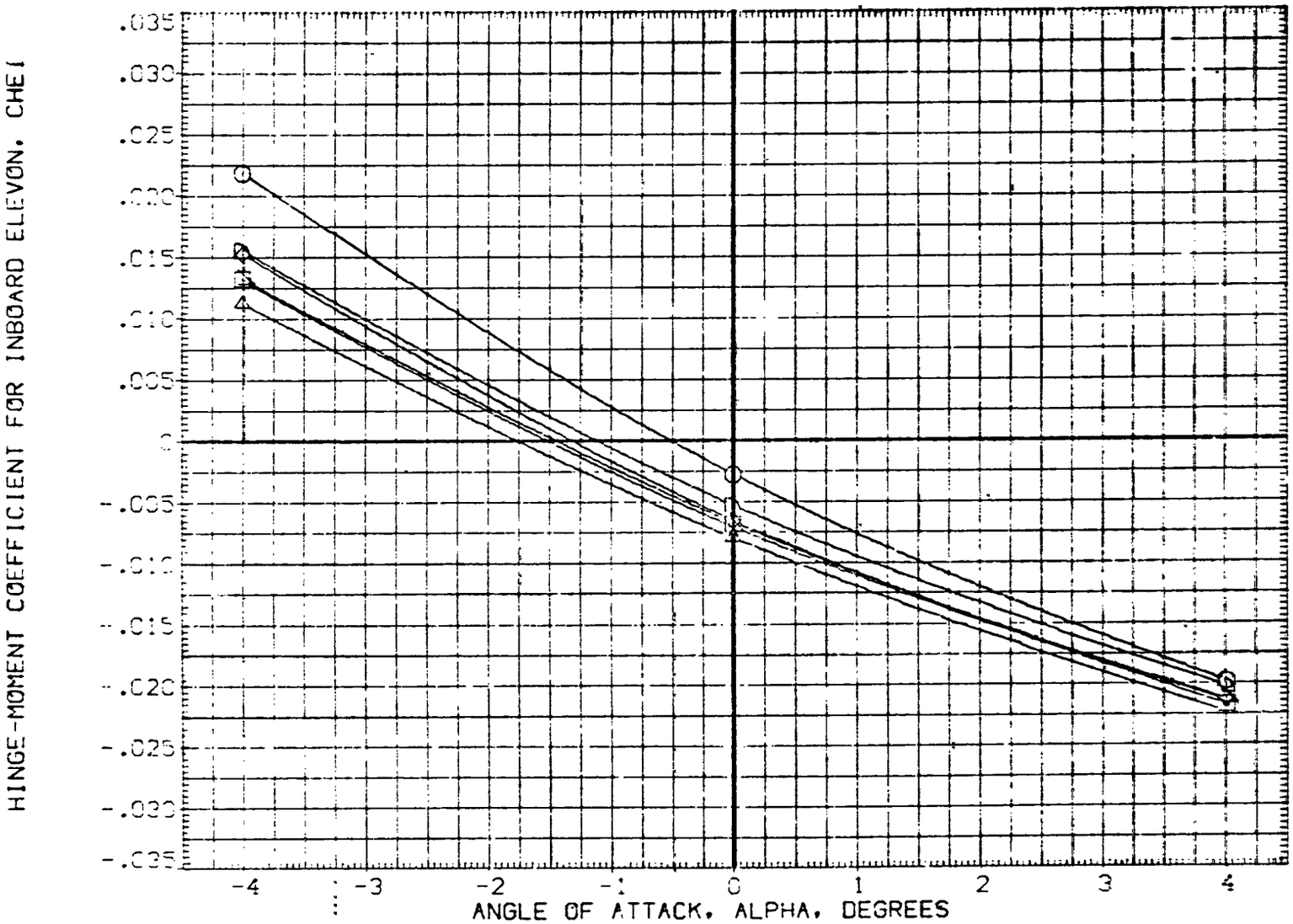


FIG.21 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN PITCH, MACH=2.2

CA(BETA = .00

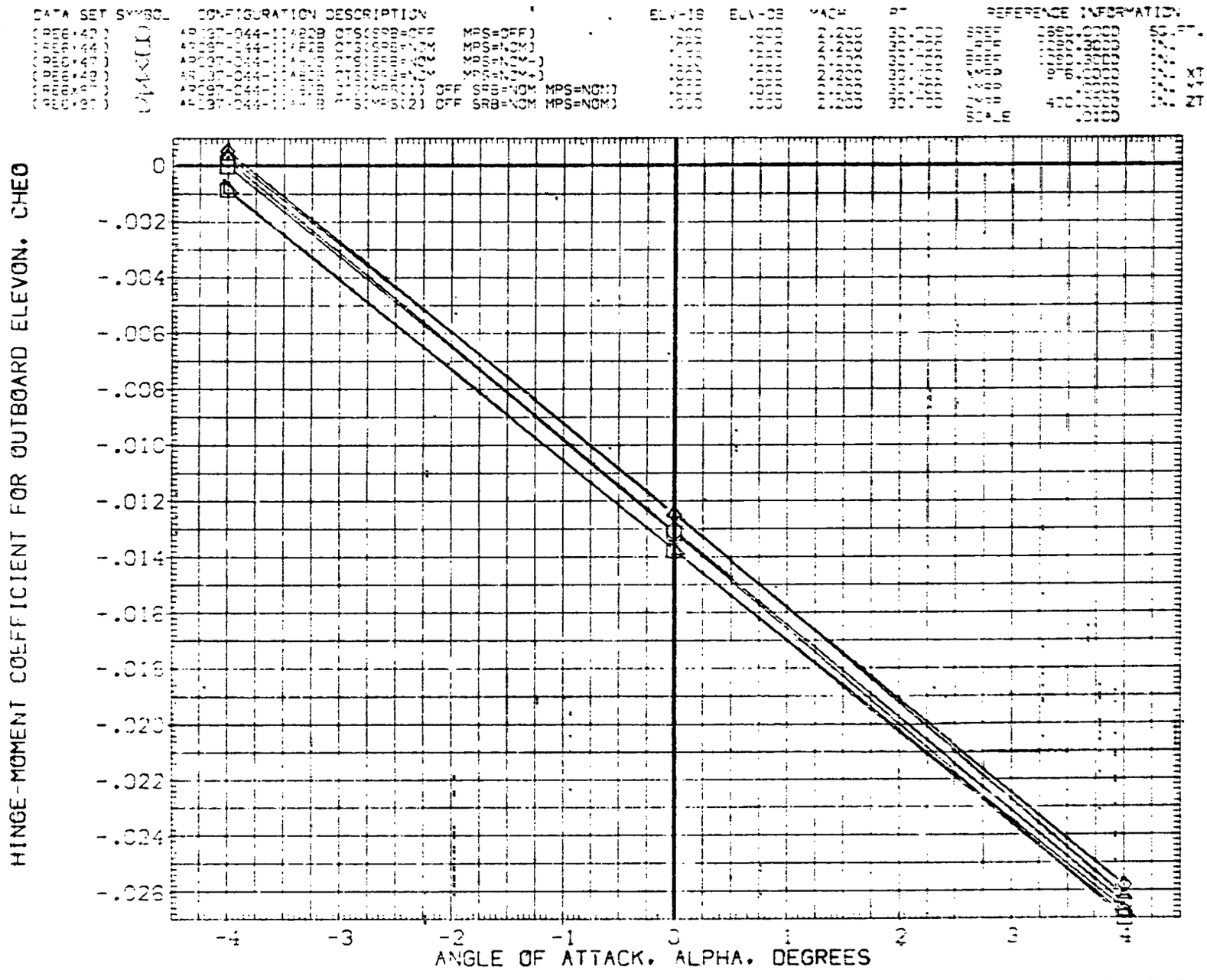


FIG.21 MPS PLUME SIZE/ENG. CUT EFFECT ON ELV. HINGE MOMENTS IN PITCH, MACH=2.2

(ADBETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		
(RE6*28)		ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700	SREF	2580.0000	SQ.FT.
(RE6*30)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700	LREF	1280.3000	IN.
(RE6*33)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	1.550	30.700	BREF	1280.3000	IN.
(RE6*34)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	1.550	30.700	XMRP	875.0000	IN. XT
(RE6*85)		ARC97-044-11A82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700	YMRP	.0000	IN. YT
(RE6*88)		ARC97-044-11A82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700	ZMRP	400.0000	IN. ZT
							SCALE	.0100	

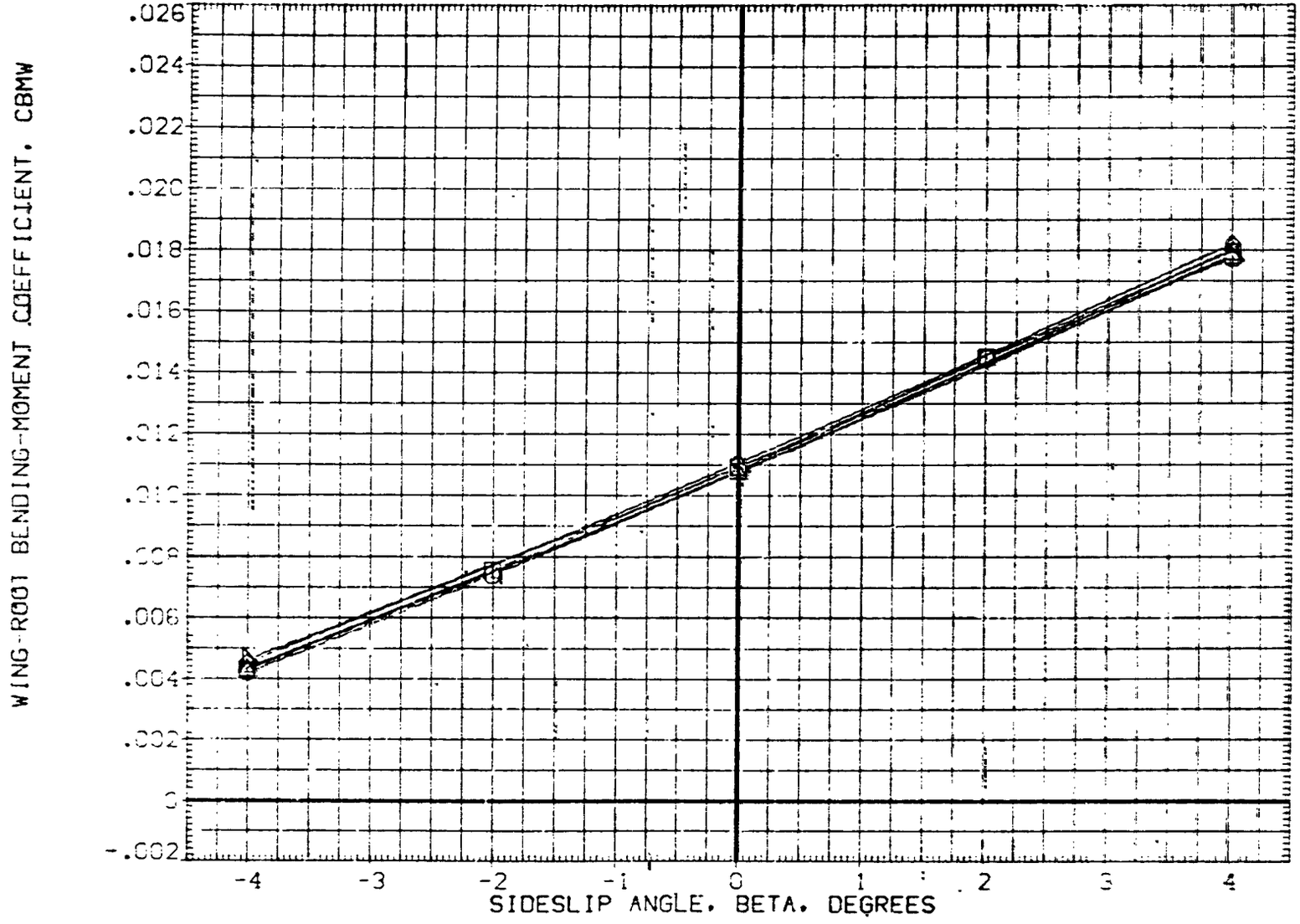


FIG.22 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=1.55

(A)ALPHA = .00

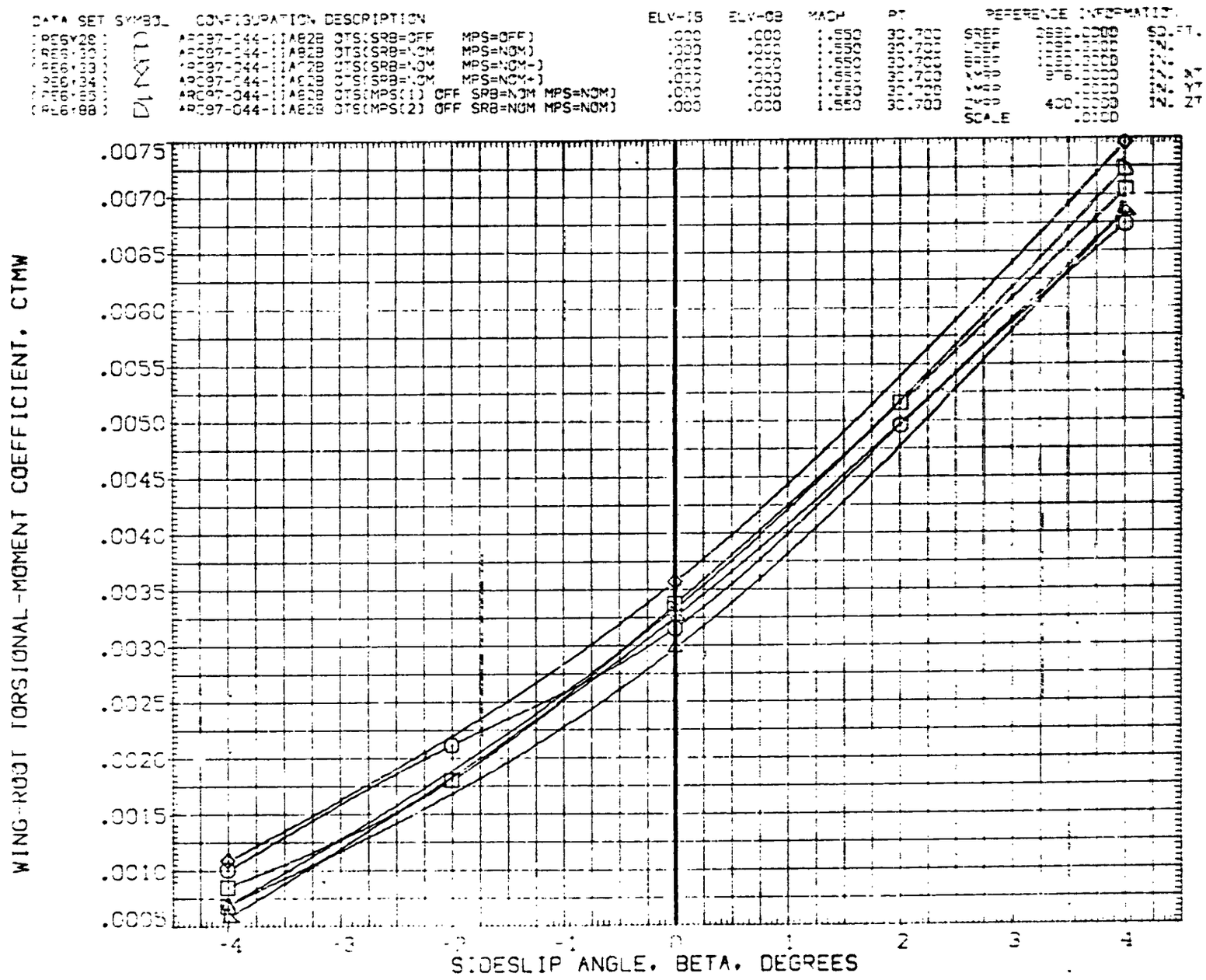


FIG.22 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=1.55

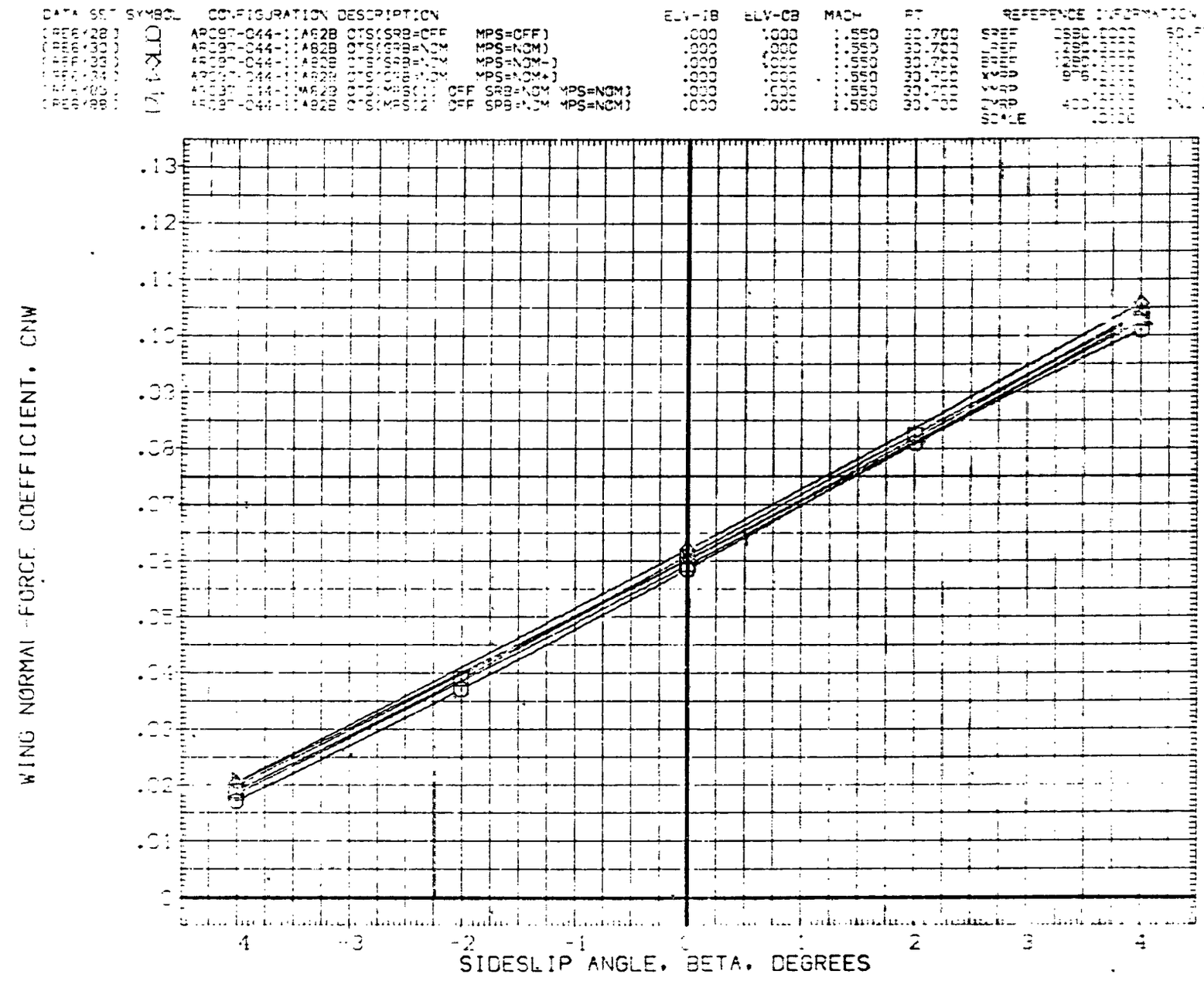


FIG.22 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=1.55

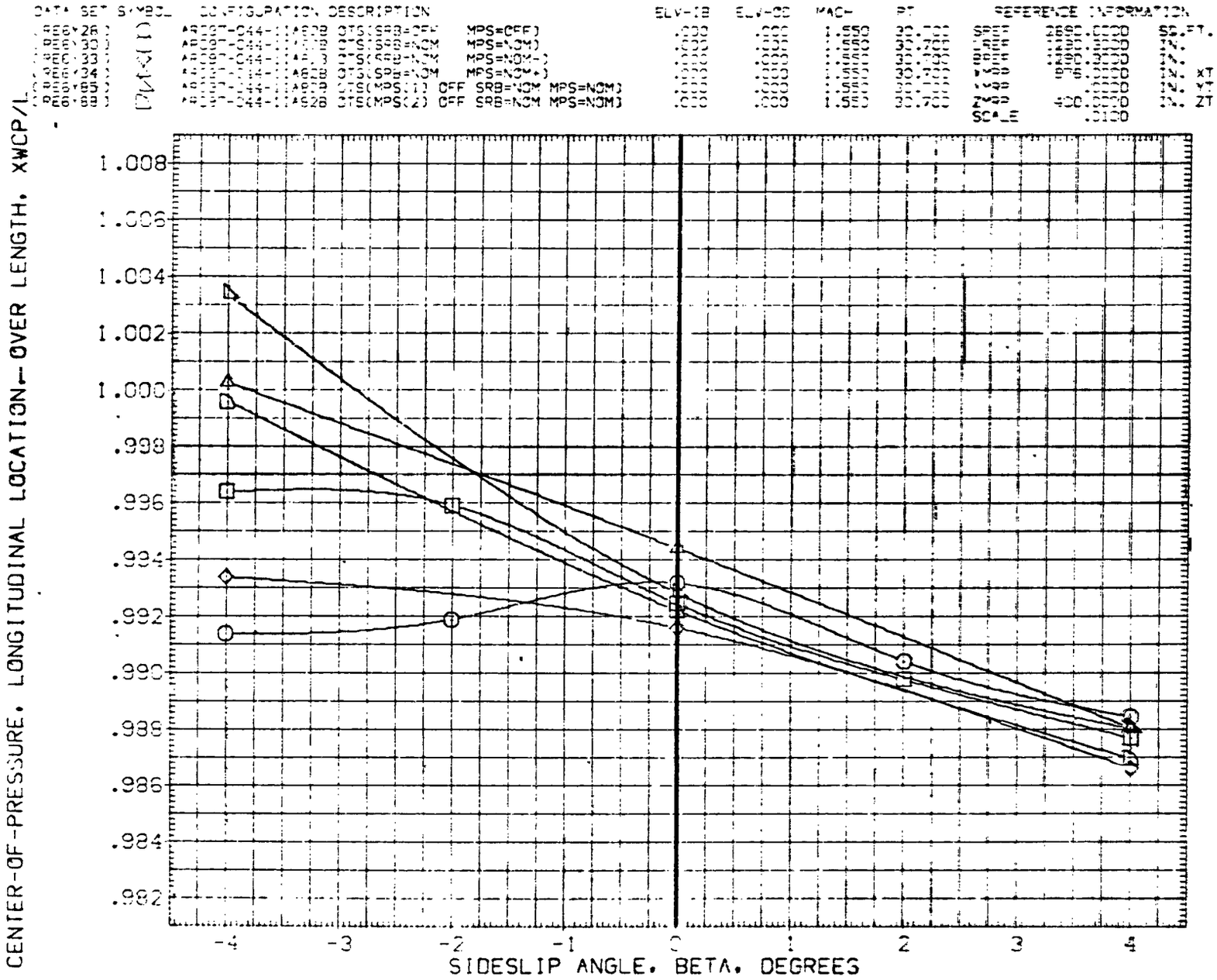


FIG.22 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=1.55

(ALPHA = .00

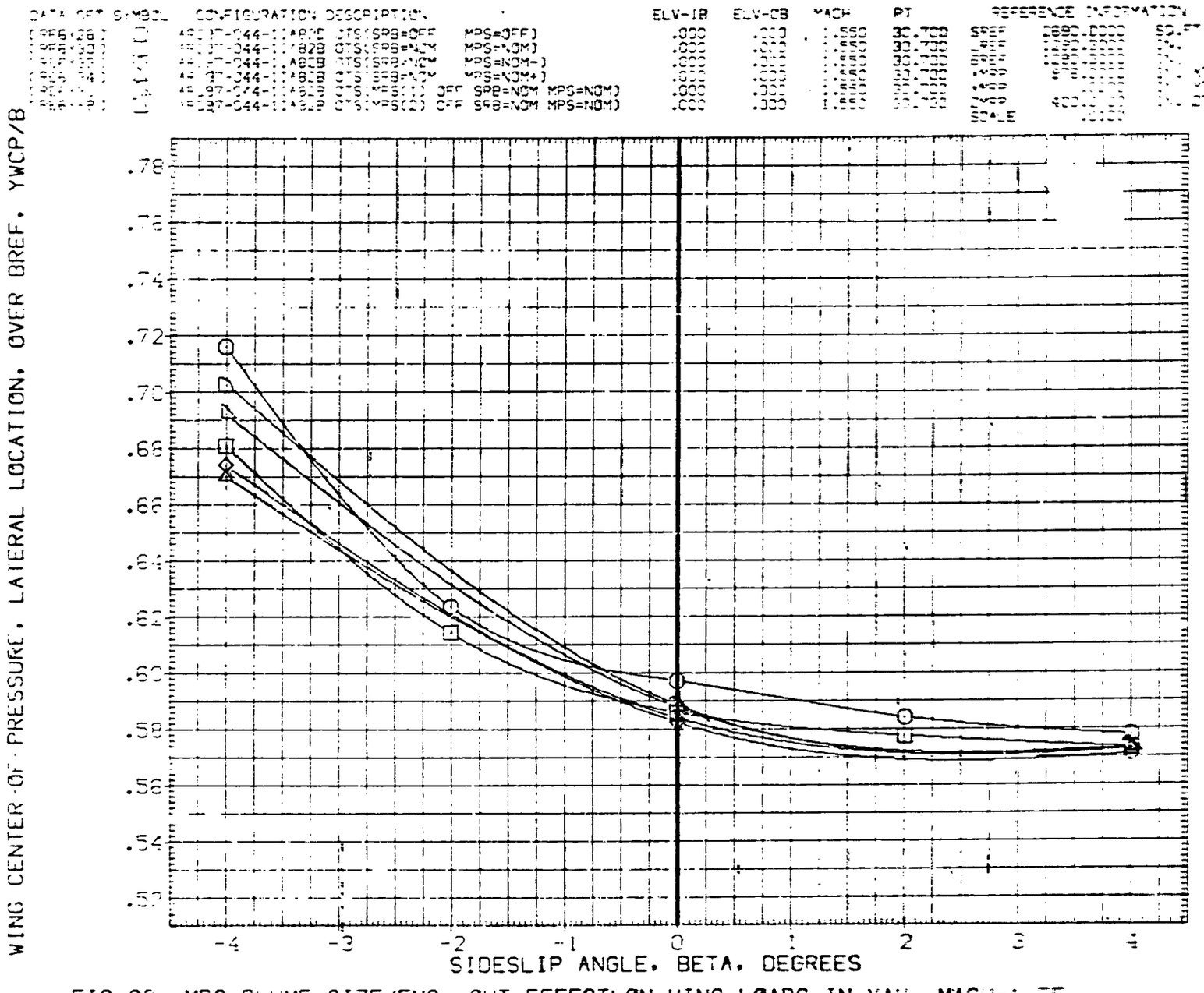


FIG.22 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=1.55

CA)ALPHA = . .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		
(RE6Y35)		ARC87-044-11A82B GTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700	S REF	6281.0000	SQ.FT.
(RE6Y37)		ARC87-044-11A82B GTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	LREF	1181.0000	IN.
(RE6Y40)		ARC87-044-11A82B GTS(SRB=NOM MPS=NOM-)	.000	.000	2.000	30.700	BREF	1181.0000	IN.
(RE6Y41)		ARC87-044-11A82B GTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700	XMRP	978.0000	IN. XT
(RE6Y85)		ARC87-044-11A82B GTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	ZMRP	.0000	IN. ZT
(RE6Y89)		ARC87-044-11A82B GTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	ZMRP	400.0000	IN. ZT
							SCALE	.0100	

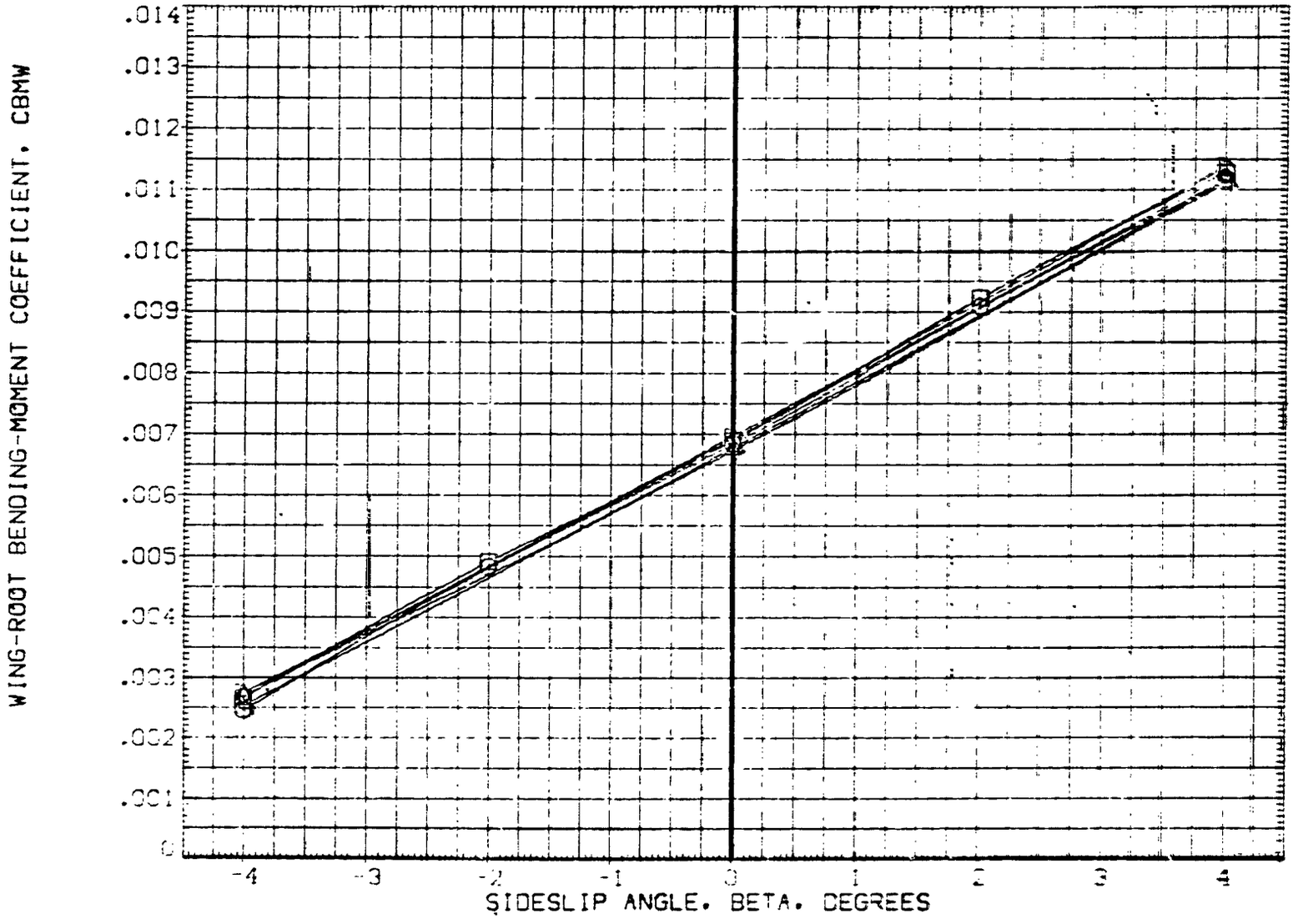


FIG.23 MPS PLUME SIZE/ENG. CUT EFFECT ON WING LOADS IN YAW, MACH=2.0

(ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
	AP097-044-11A02B CTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700	SREF 1690.0000 BP.PT.
	AP097-044-11A02B CTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	LREF 1690.0000 XX
	AP097-044-11A02B CTS(SRB=NOM MPS=NOM-)	.000	.000	2.000	30.700	BREF 1690.0000 YY
	AP097-044-11A02B CTS(SRB=NOM MPS=NOM+)	.000	.000	2.000	30.700	XMC 1690.0000 ZZ
	AP097-044-11A02B CTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	XMC 1690.0000 XX
	AP097-044-11A02B CTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.000	30.700	ZMC 1690.0000 ZZ
						SCALE 1.000

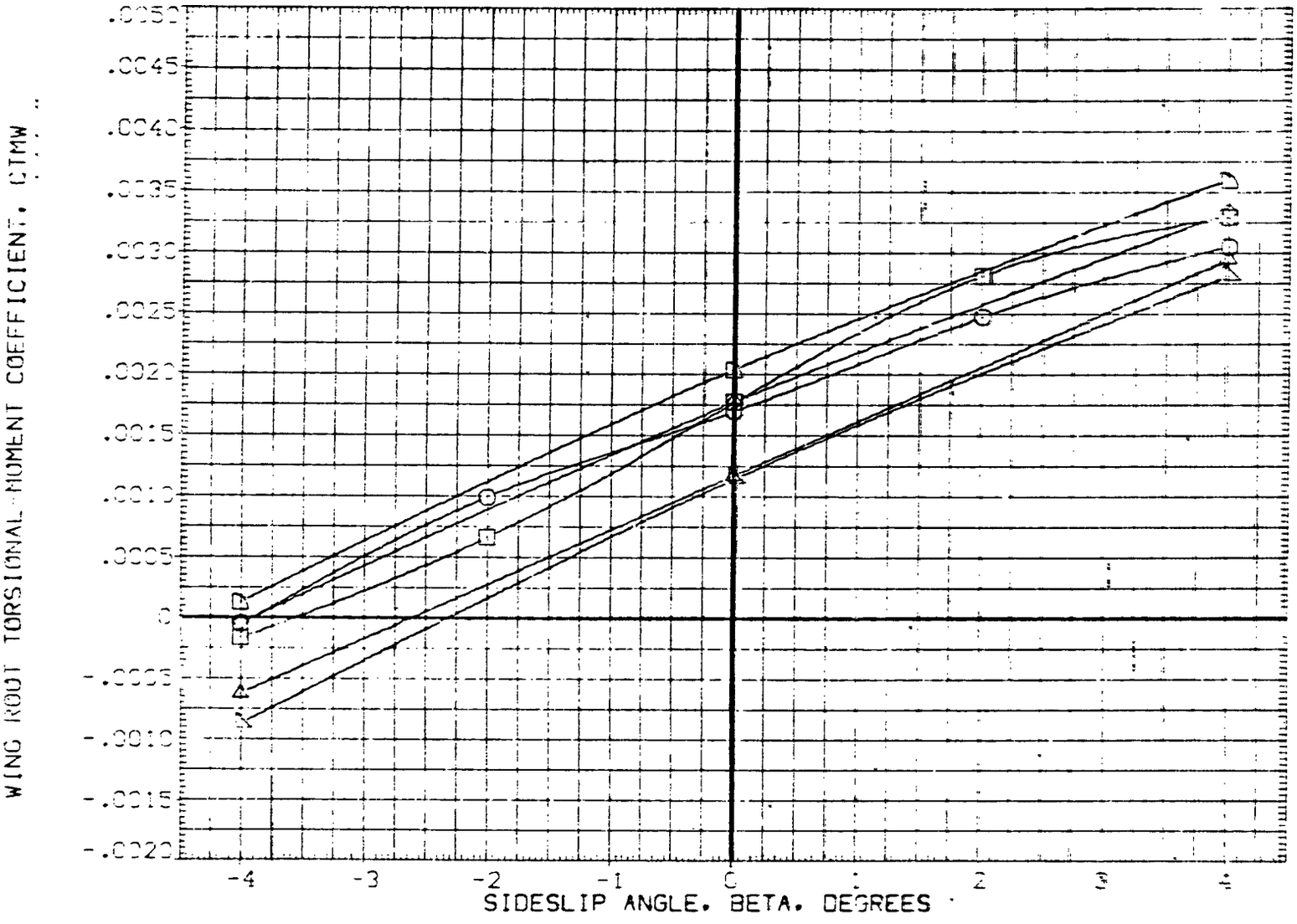


FIG.23 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.0

(A)ALPHA = .00

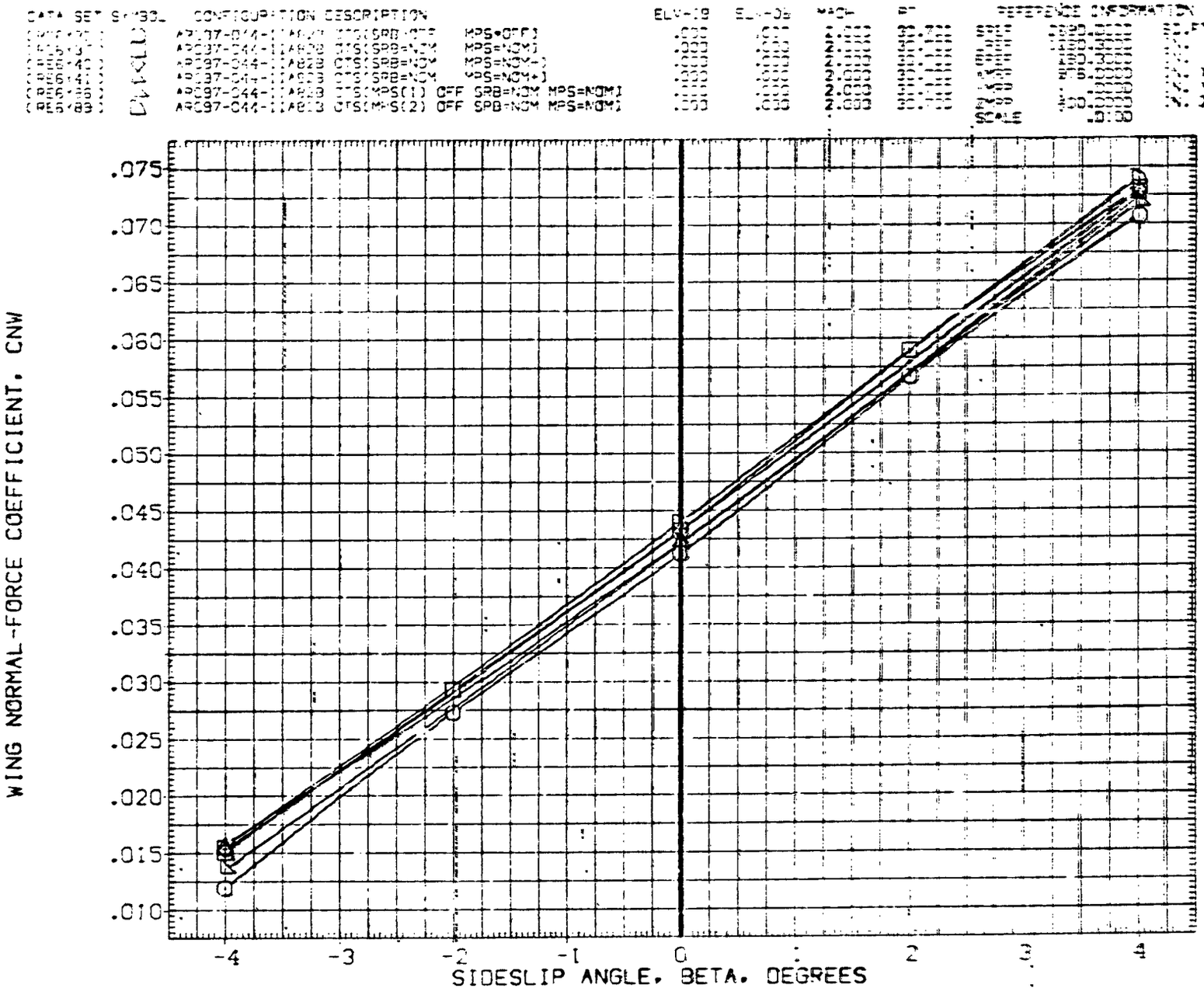


FIG.23 MPS PLUME SIZE/ENG. CUT EFFECT ON WING LOADS IN YAW, MACH=2.0

(A)ALPHA = .00

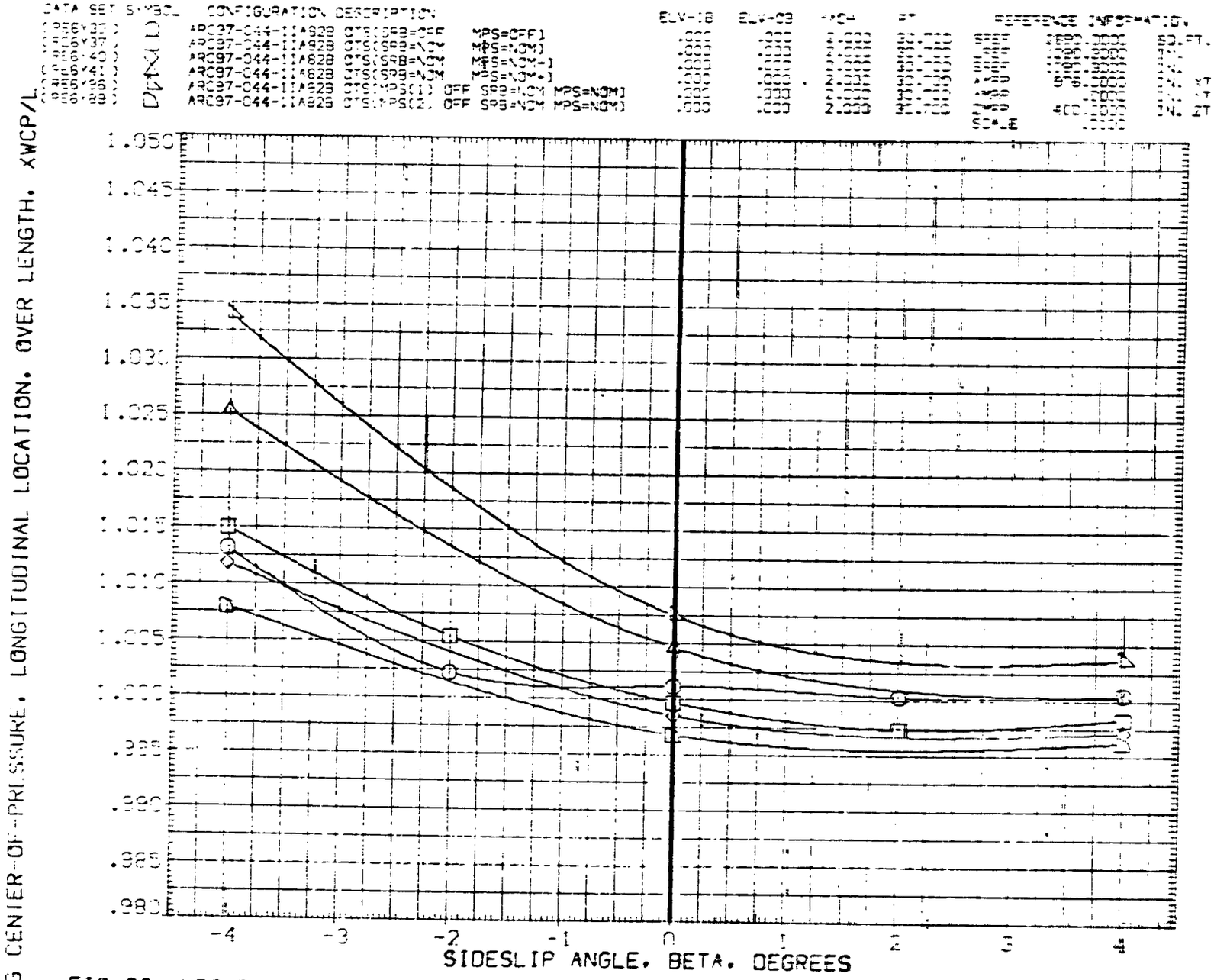


FIG.23 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.0

(A)ALPHA = .00

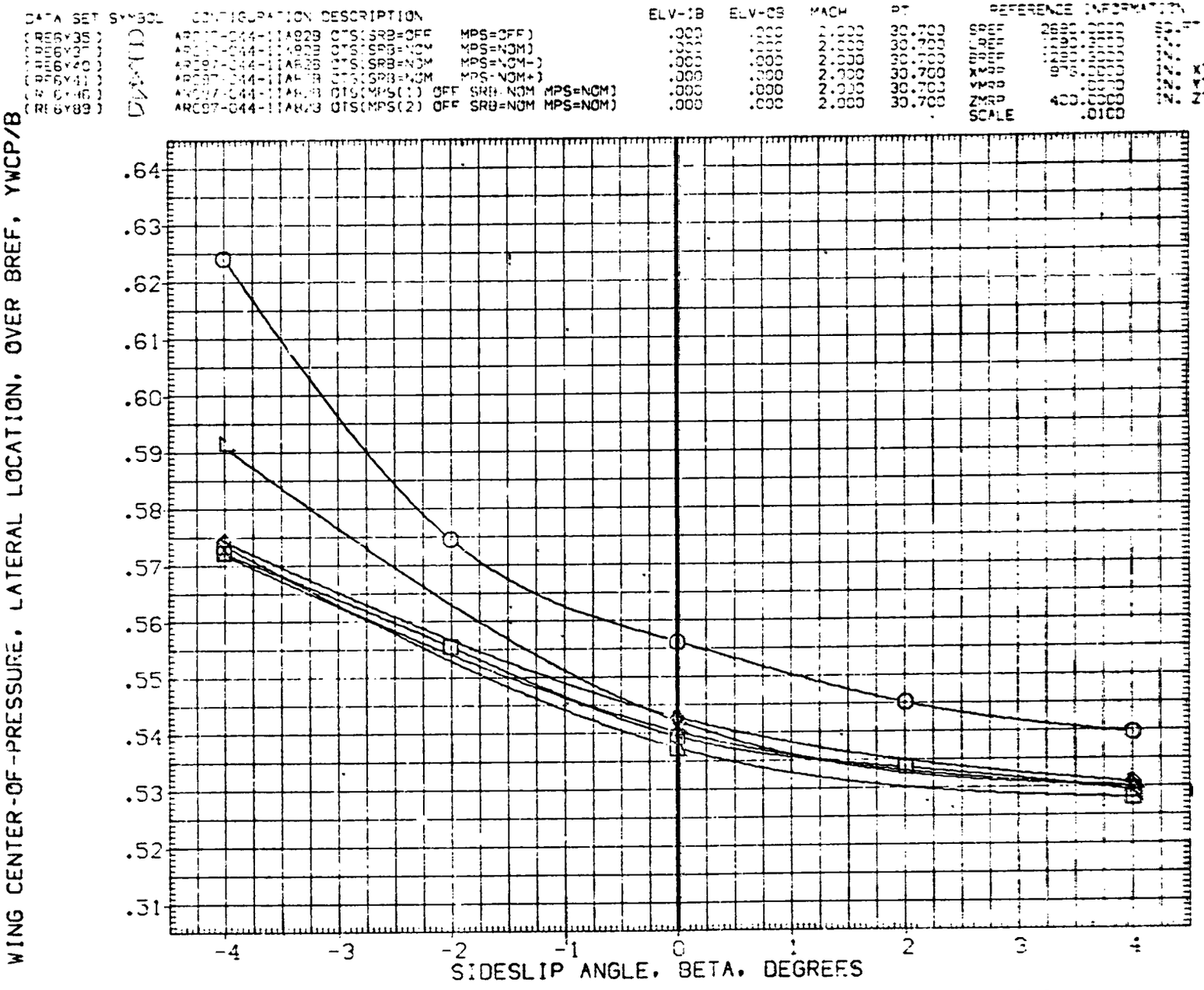


FIG.23 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y42)		ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6Y44)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6Y47)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700
(RE6Y49)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700
(RE6Y87)		ARC97-044-1IA82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(RE6Y90)		ARC97-044-1IA82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1990.8000	IN.
BREF	1990.8000	IN.
XMRP	976.0000	IN. FT
YMRP	.0000	IN. FT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

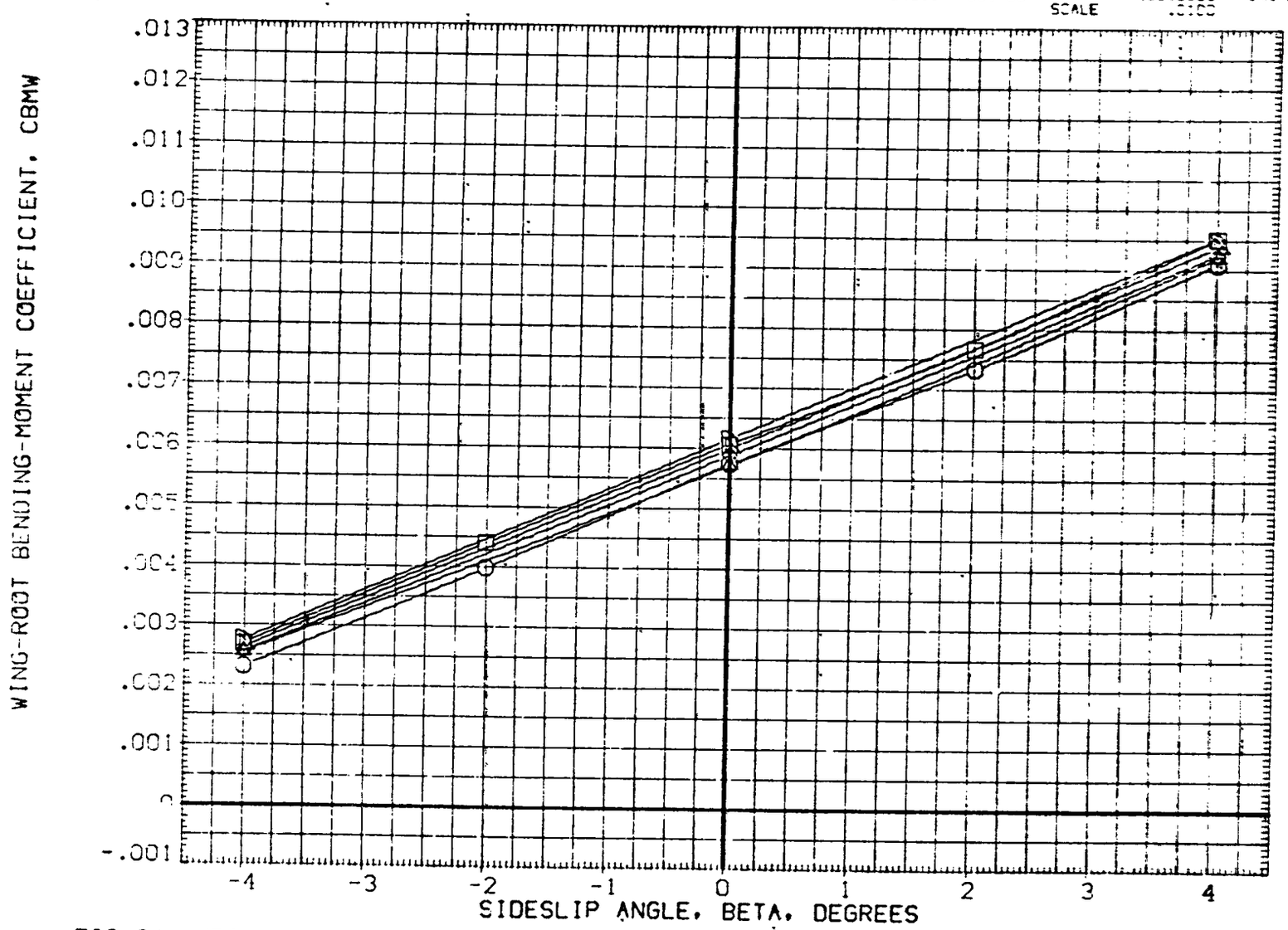


FIG.24 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.2

(A)ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		
(PE6142)	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700	SREF	2690.0000	SQ.FT.
(PE6141)	ARC97-044-11A82E OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700	LREF	1180.3000	IN.
(PE6144)	ARC97-044-11A82R OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700	BREF	1180.3000	IN.
(PE6145)	ARC97-044-11A82G OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700	XMRP	976.0000	IN. XT
(PE6187)	ARC97-044-11A822 OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700	YMRP	.0000	IN. YT
(PE6190)	ARC97-044-11A82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700	ZMRP	400.0000	IN. ZT
						SCALE	.0100	

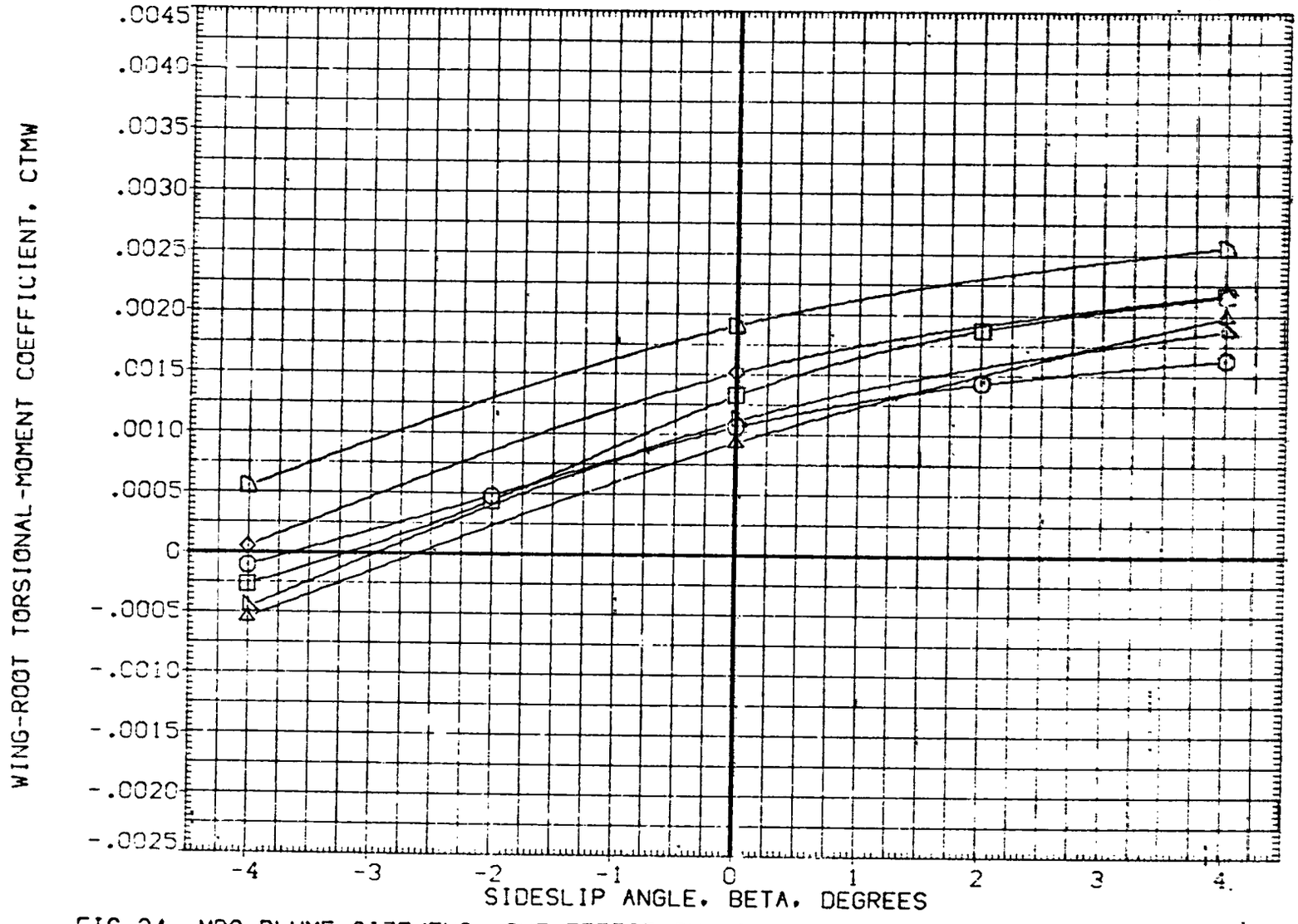


FIG.24 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PTI	REFERENCE INFORMATION		
(RE6Y42)		ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700	SREF	2590.0000	SQ.FT.
(RE6Y44)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700	LREF	1290.3000	IN.
(RE6Y47)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	2.200	30.700	BREF	1290.3000	IN.
(RE6Y49)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	2.200	30.700	XMRP	976.0000	IN. XT
(RE6Y87)		ARC97-044-11A82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700	YMRP	.0000	IN. YT
(RE6Y90)		ARC97-044-11A82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	2.200	30.700	ZMRP	400.0000	IN. ZT
							SCALE	.0100	

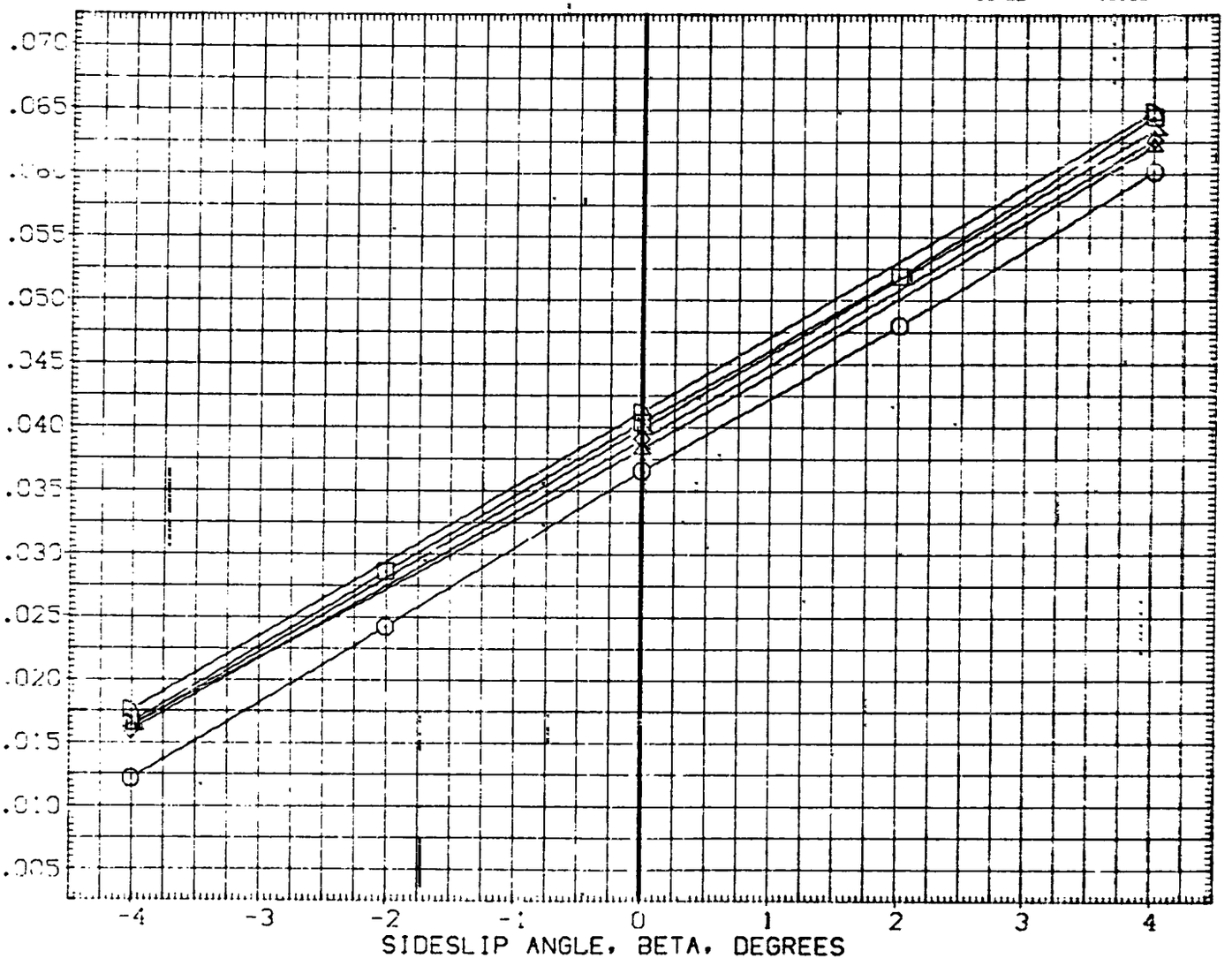


FIG.24 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.2

(A)ALPHA = .00

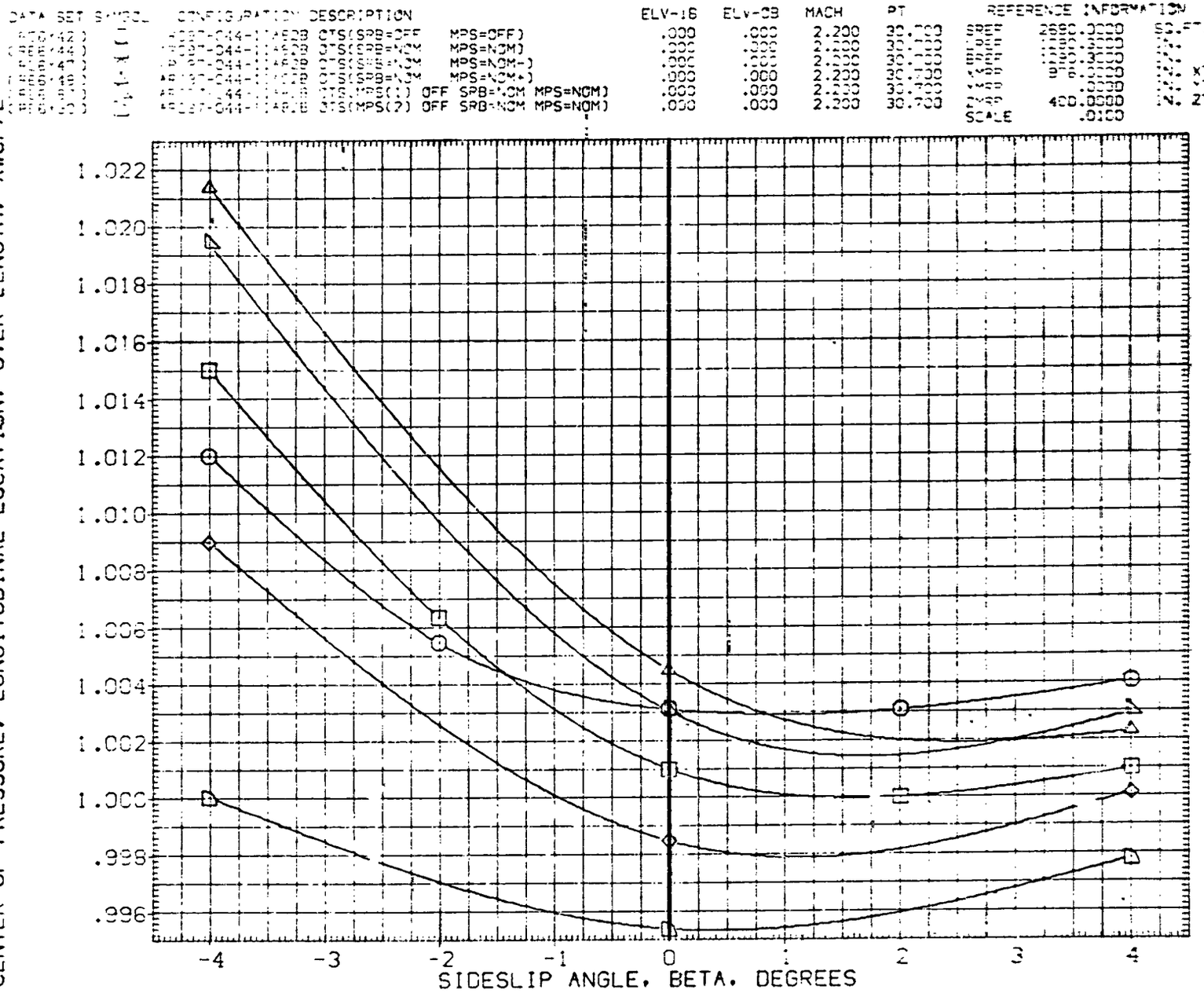


FIG.24 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.2

(A)ALPHA = .00

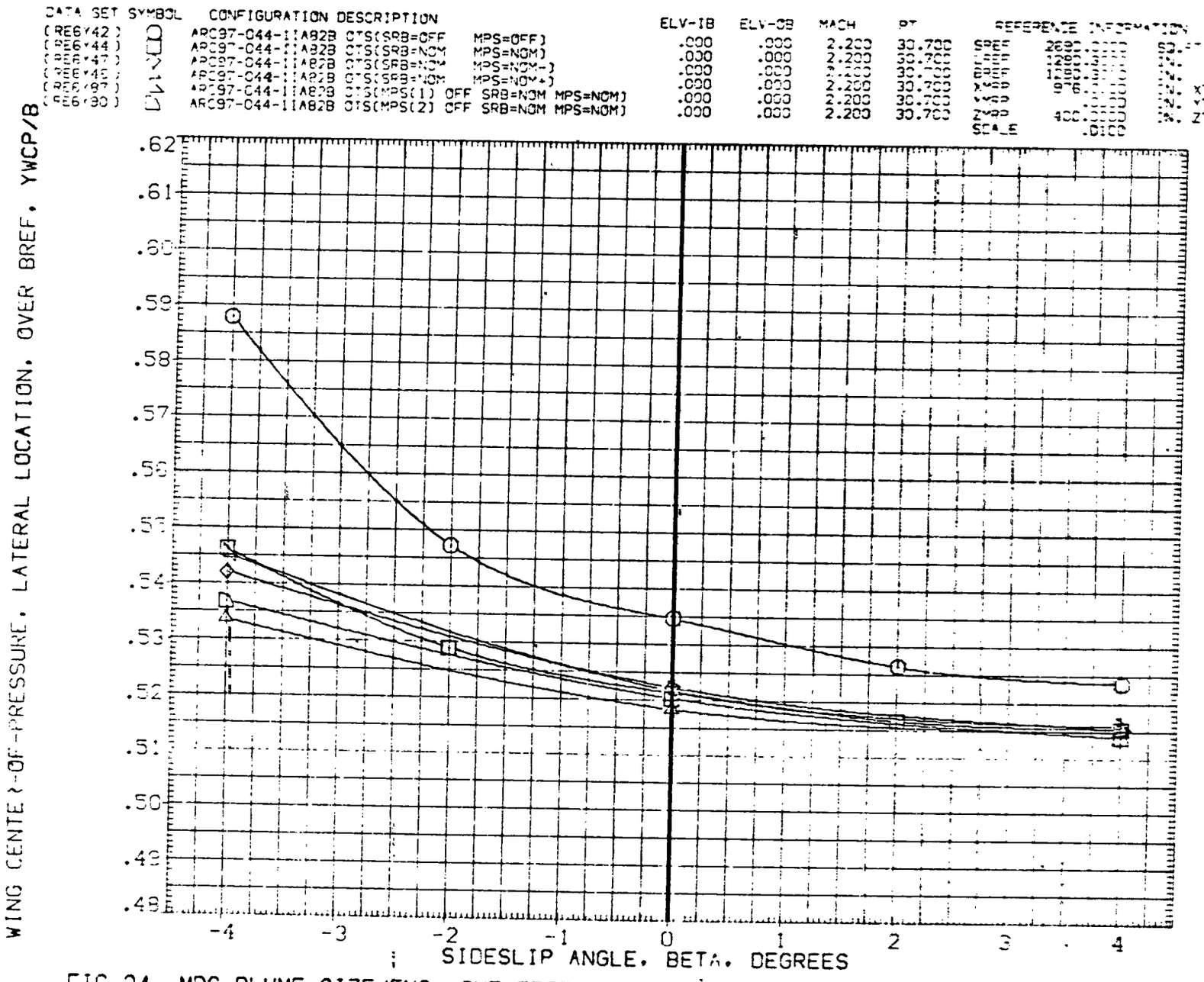


FIG.24 MPS PLUME SIZE/ENG. OUT EFFECT ON WING LOADS IN YAW, MACH=2.2

(ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y28)	DIAMOND	AP197-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RE6Y30)		AP197-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6Y33)		AP197-044-11A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	1.550	30.700
(RE6Y34)		AP197-044-11A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	1.550	30.700
(RE6Y85)		AP197-044-11A82B OTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6Y88)		AP197-044-11A82B OTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1000.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

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-4 -3 -2 -1 0 1 2 3 4

SIDESLIP ANGLE, BETA, DEGREES

FIG.25 MPS PLUME SIZE/ENC. OUT EFFECT ON ELV. HINGE MOMENTS IN YAW, MACH=1.55

DATA_PATA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(REEXEC)		ARC97-044-11A829 CTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(REEXEC)		ARC97-044-11A829 CTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(REEXEC)		ARC97-044-11A829 CTS(SRB=NOM MPS=NOM-)	.000	.000	1.550	30.700
(REEXEC)		ARC97-044-11A829 CTS(SRB=NOM MPS=NOM+)	.000	.000	1.550	30.700
(REEXEC)		ARC97-044-11A829 CTS(MPS(1) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(REEXEC)		ARC97-044-11A829 CTS(MPS(2) OFF SRB=NOM MPS=NOM)	.000	.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

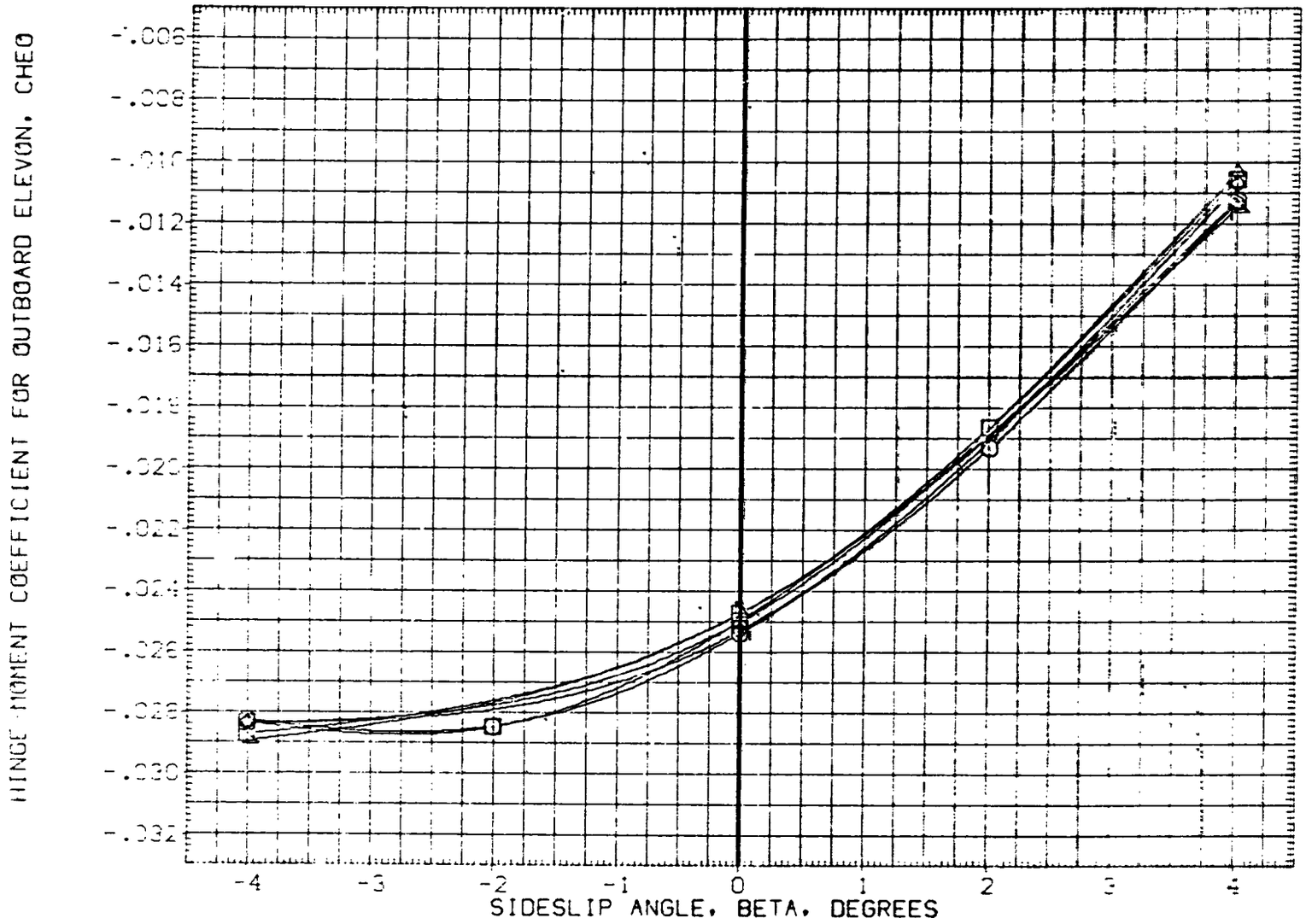


FIG.25 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN YAW. MACH=1.55

(ADALPHA = .00

PAGE 80

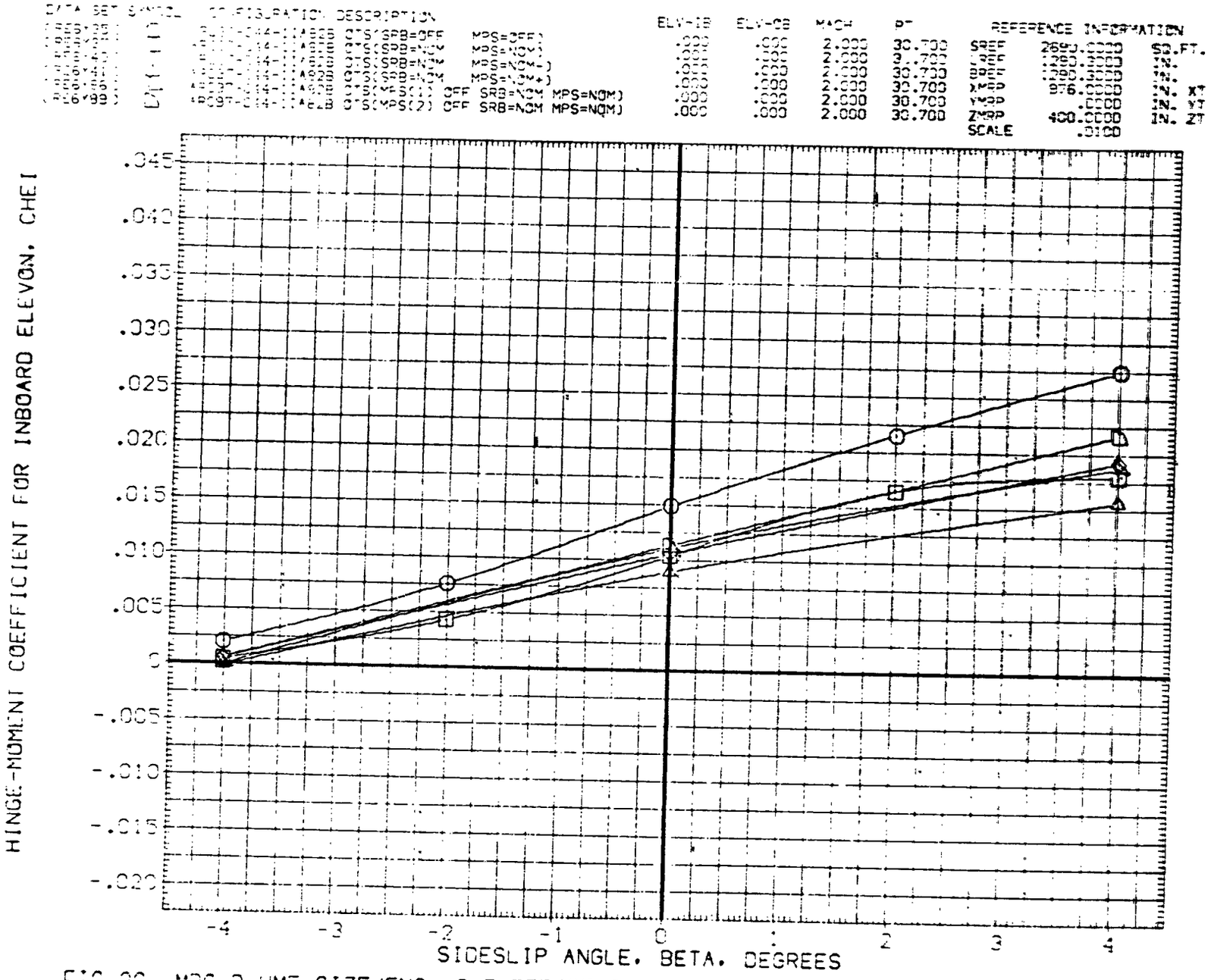


FIG.26 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN YAW, MACH=2.0

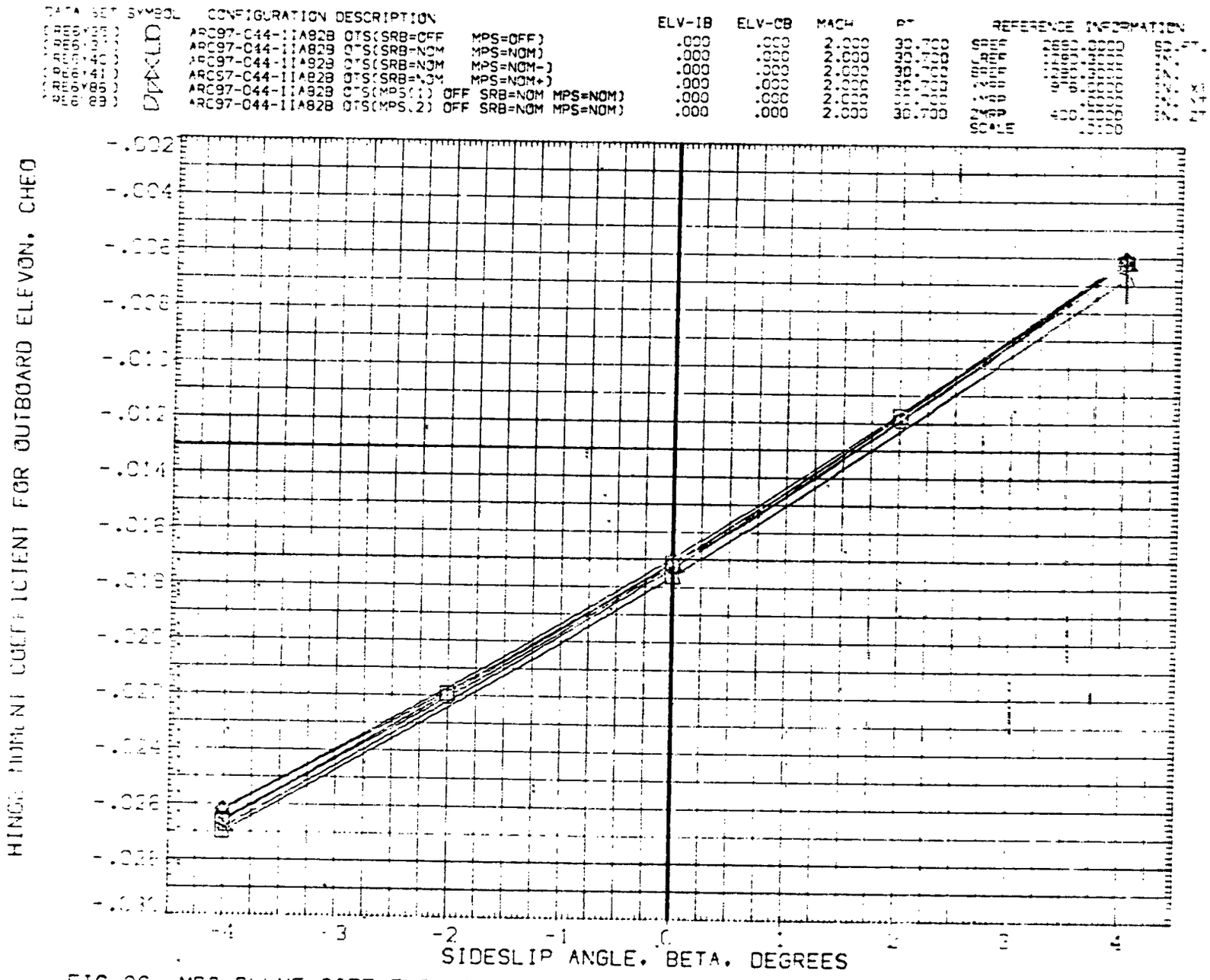


FIG.26 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN YAW, MACH=2.0

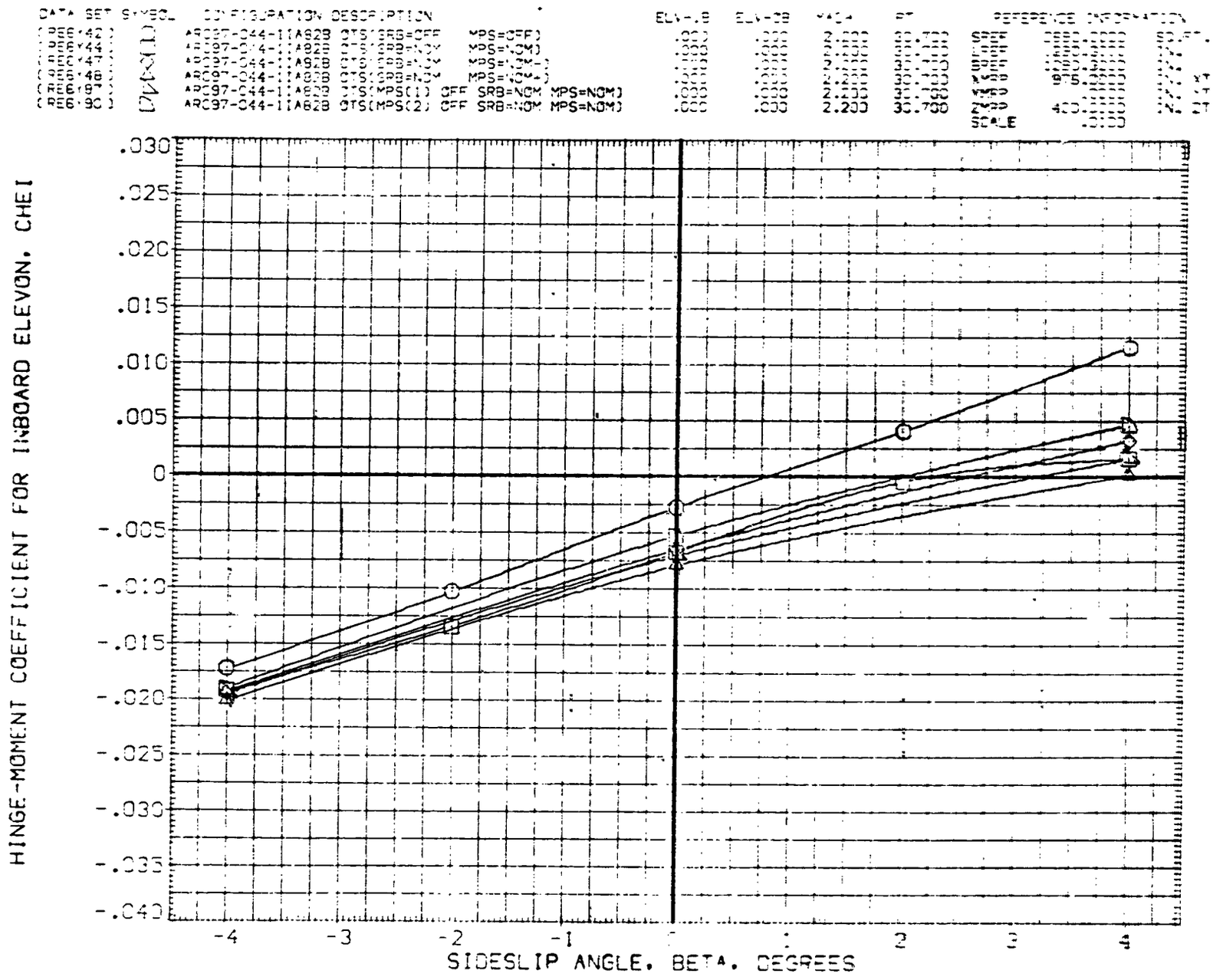


FIG.27 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN [illegible], M=2.2

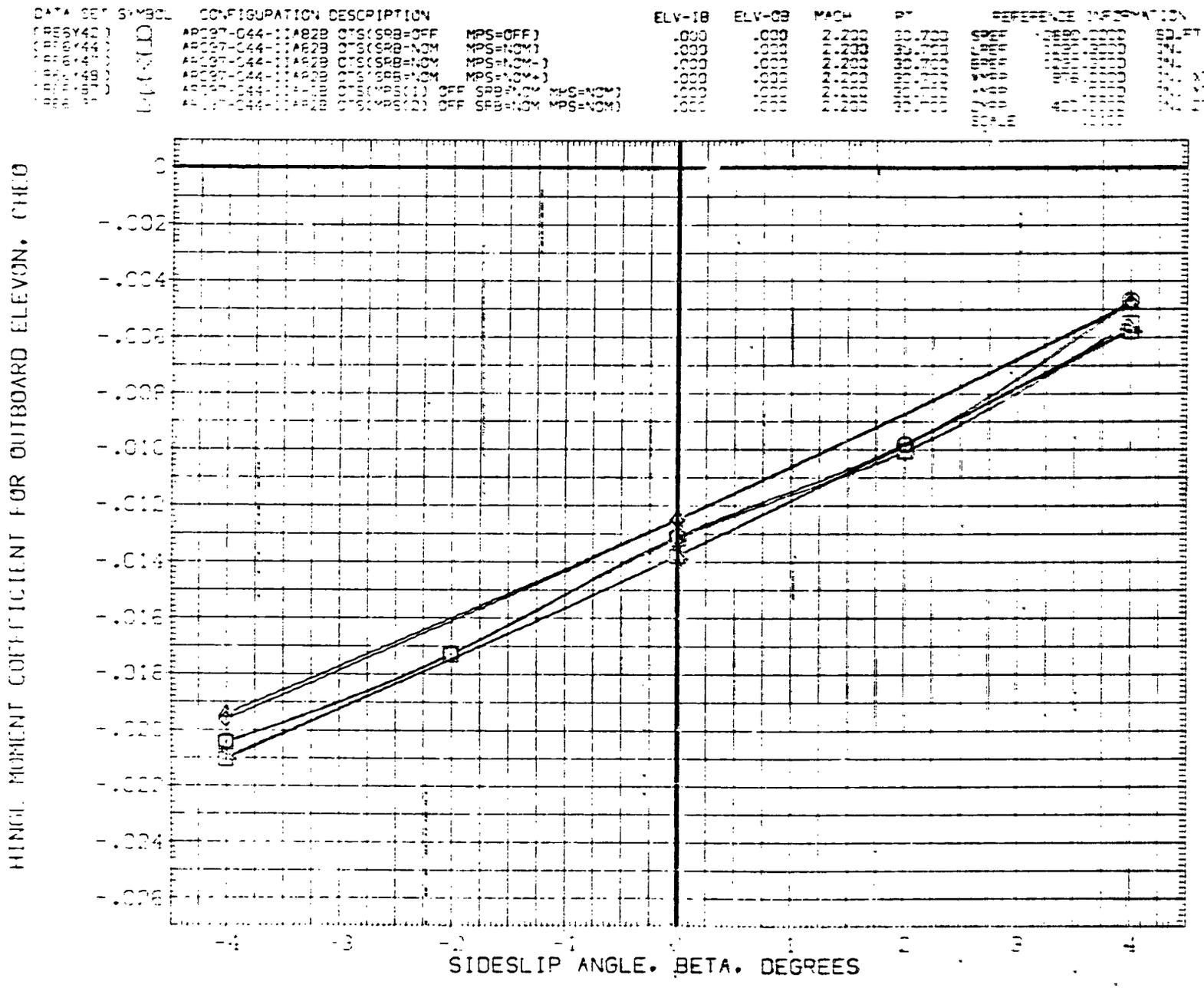


FIG.27 MPS PLUME SIZE/ENG. OUT EFFECT ON ELV. HINGE MOMENTS IN YAW, MACH=2.2

DADA_PHA = .00

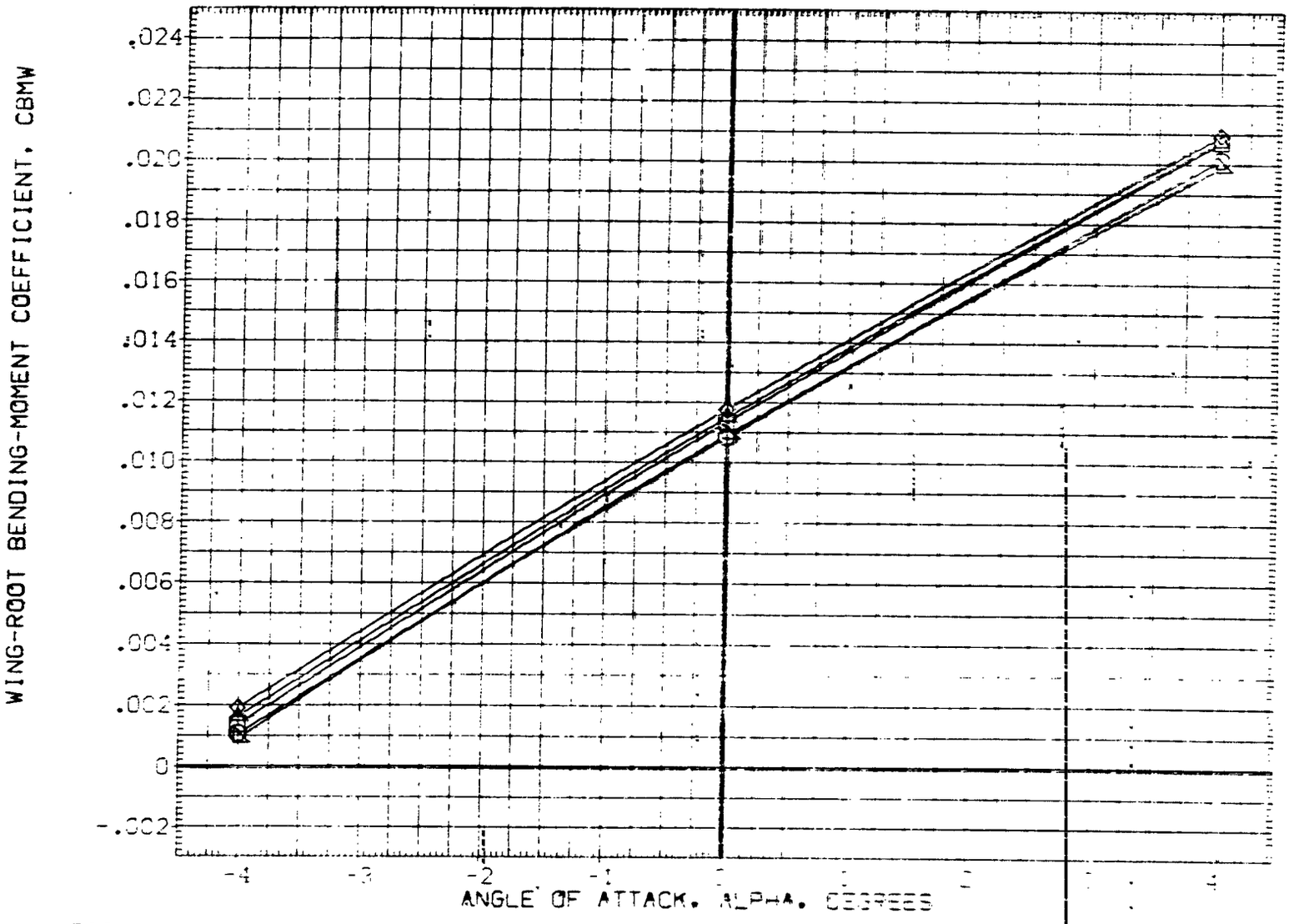


FIG.28 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 1.55

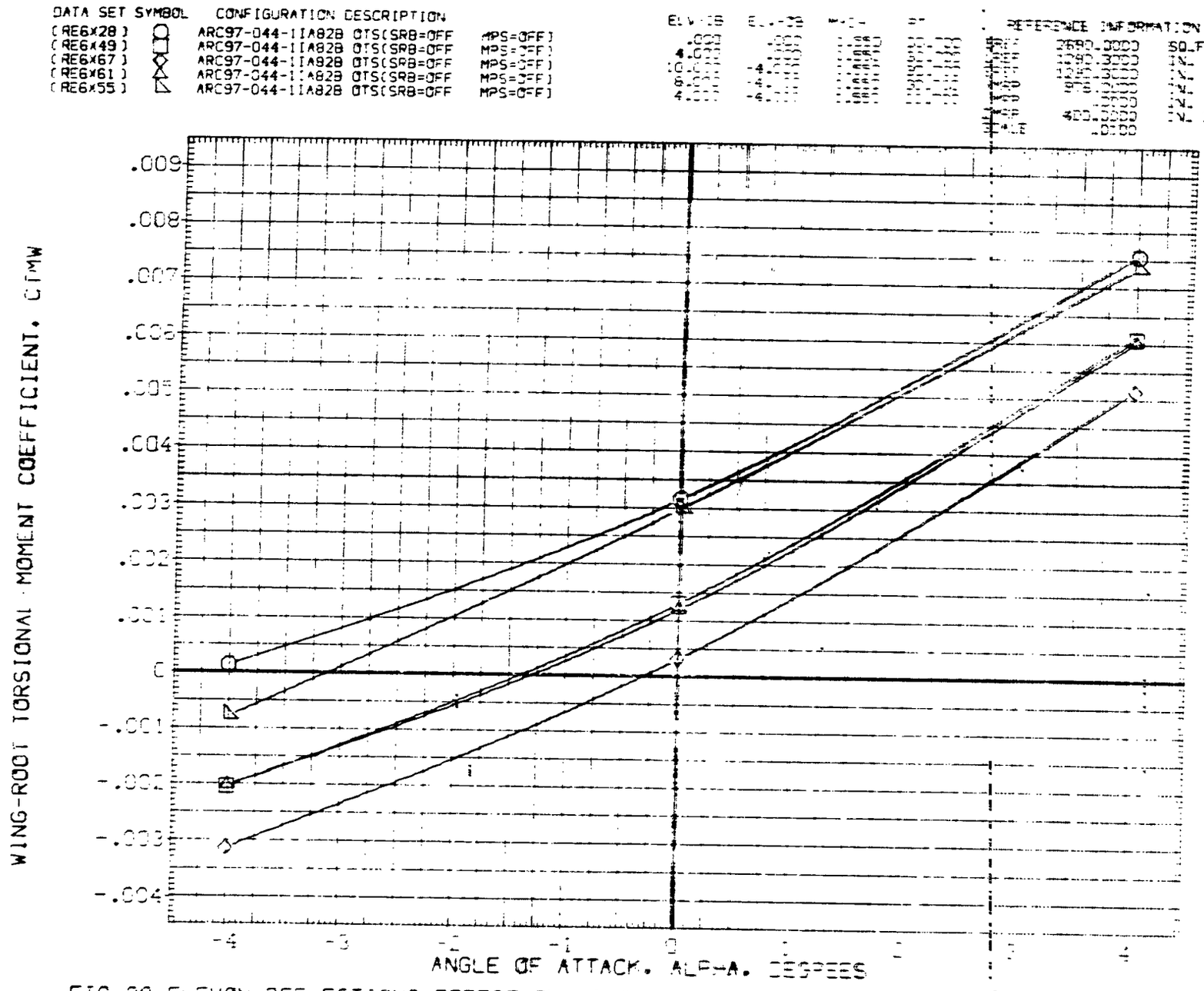


FIG.28 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, PWR OFF, MACH = 1.55
(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
(RE6X28)	□	ARC97-044-1 A82B	OTS(SRB=ON MPS=OFF)	.000	.000	1.550	30.700	SREF 289.0000 SQ.FT.
(RE6X49)	◇	ARC97-044-1 A82B	OTS(SRB=OFF MPS=OFF)	4.000	.000	1.550	30.700	LREF 1250. IN.
(RE6X67)	△	ARC97-044-11A	TS(SRB OFF MPS=OFF)	10.000	-4.000	1.550	30.700	BREF 1250. IN.
(RE6X61)	◁	ARC97-044-11A	(S(SRB=OFF MPS=OFF)	8.000	4.000	1.550	30.700	XMRP 975.0000 IN. AT
(RE6X55)	▷	ARC97-044-11Ab	TS(SRB=OFF MPS=OFF)	4.000	-4.000	1.550	30.700	ZMRP 400.0000 IN. AT
								SCALE .0100

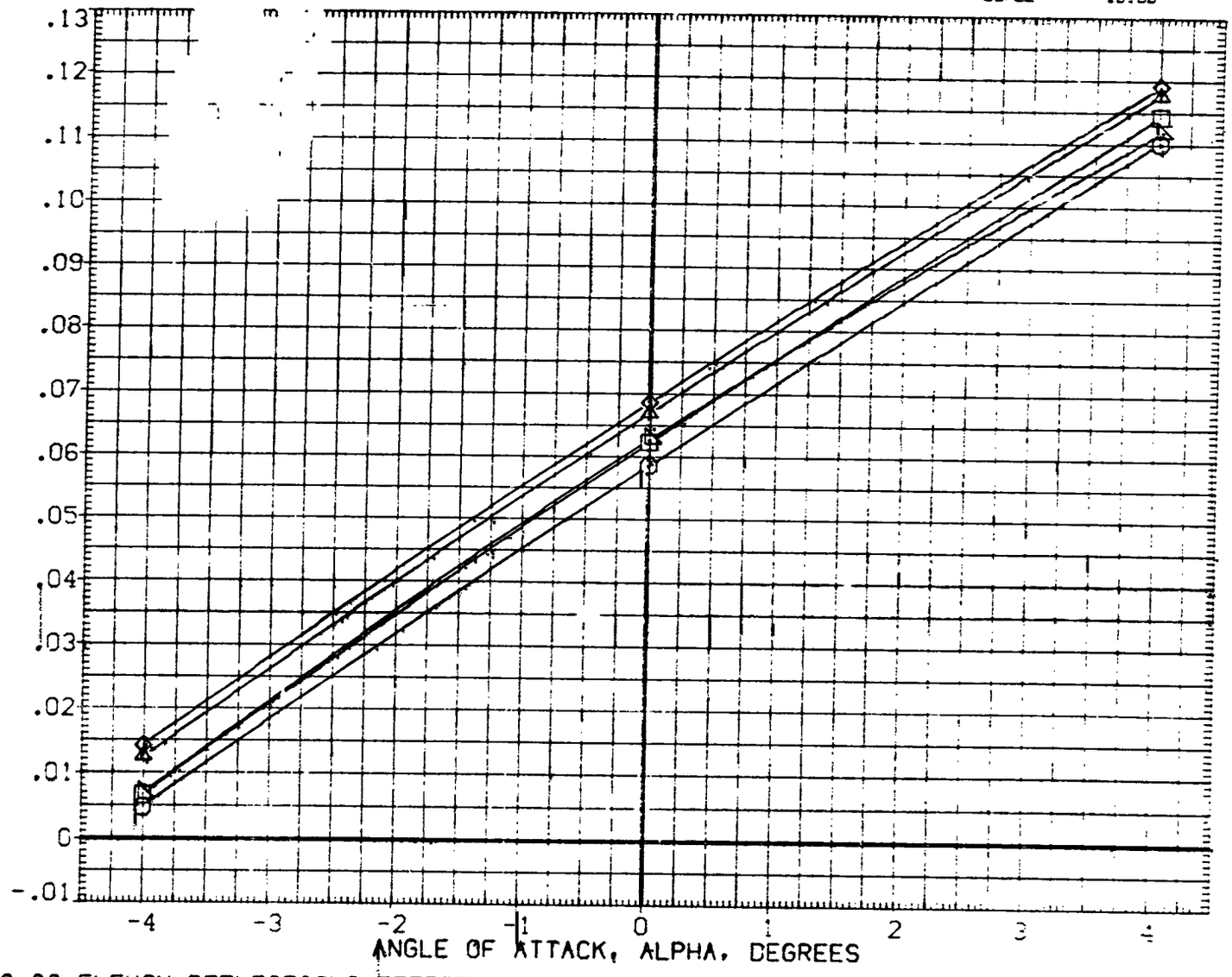


FIG.28 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 1.55

(A)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X28)	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RE6X49)	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	.000	1.550	30.700
(RE6X67)	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6X61)	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6X55)	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

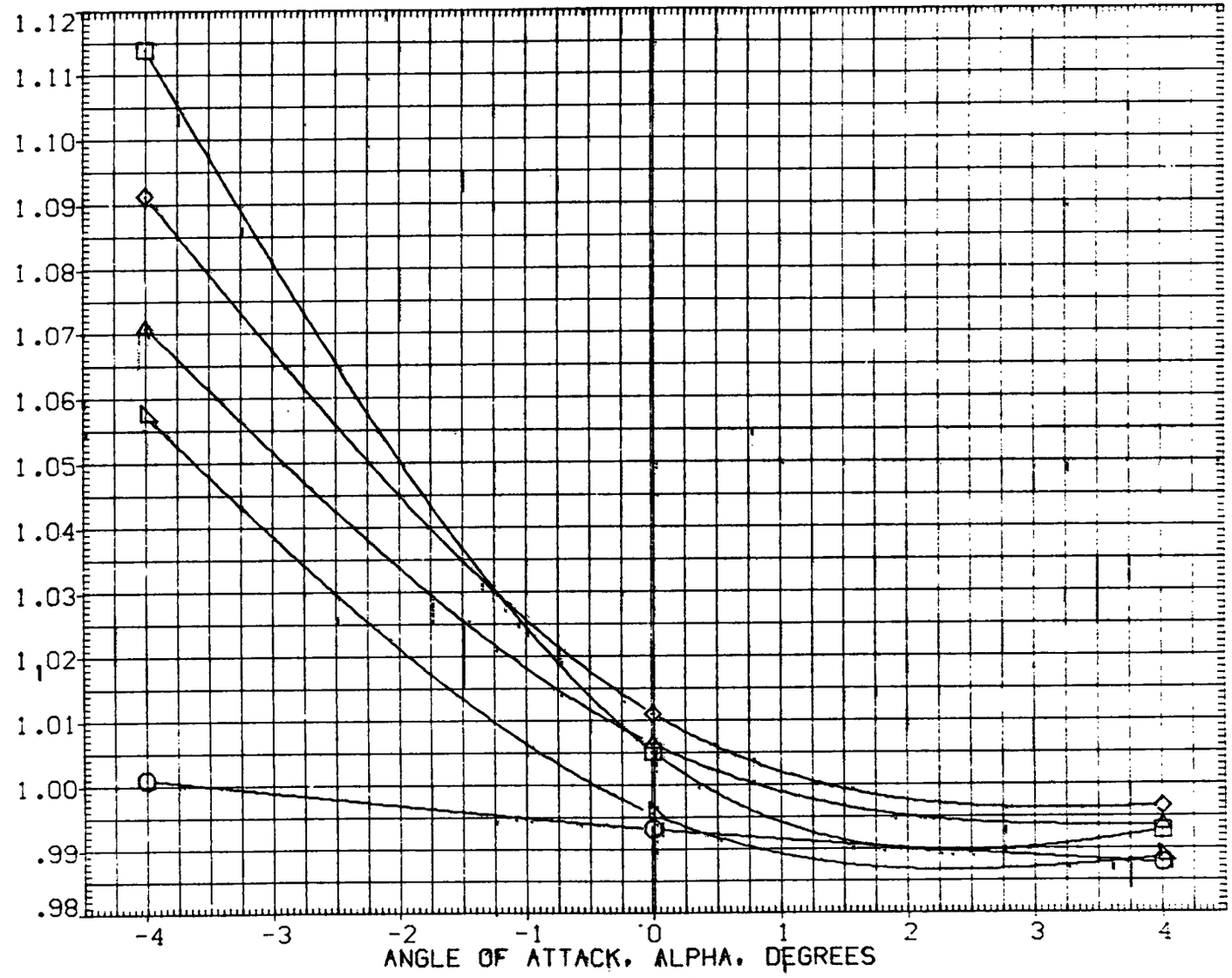


FIG.28 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X28)	○	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	1.550	30.700
(RE6X49)	□	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	.000	1.550	30.700
(RE6X67)	◇	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6X61)	△	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6X55)	▽	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

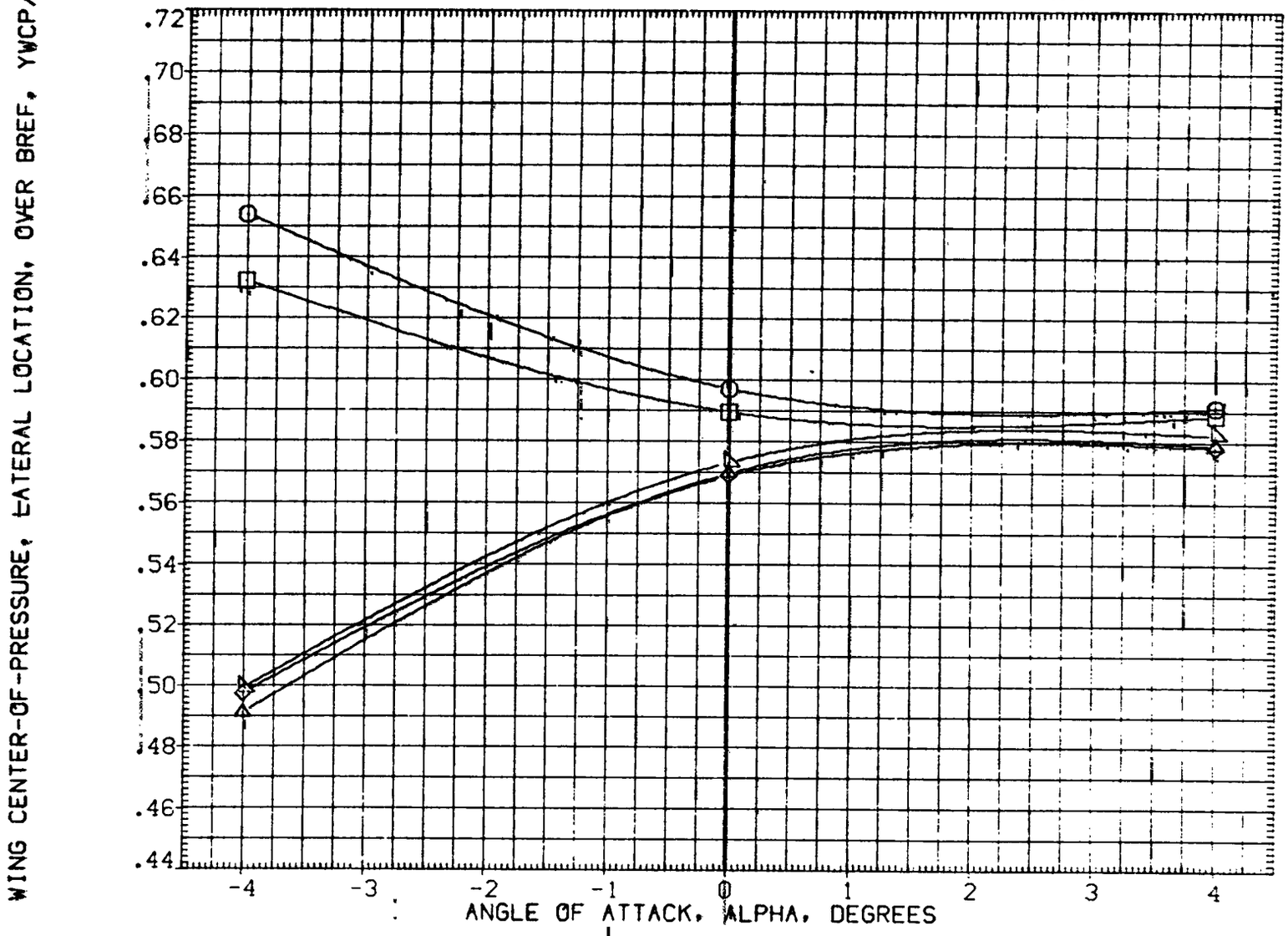


FIG.28 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6x35)		ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6x51)		ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.000	30.700
(RE6x69)		ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.000	30.700
(RE6x63)		ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.000	30.700
(RE6x57)		ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

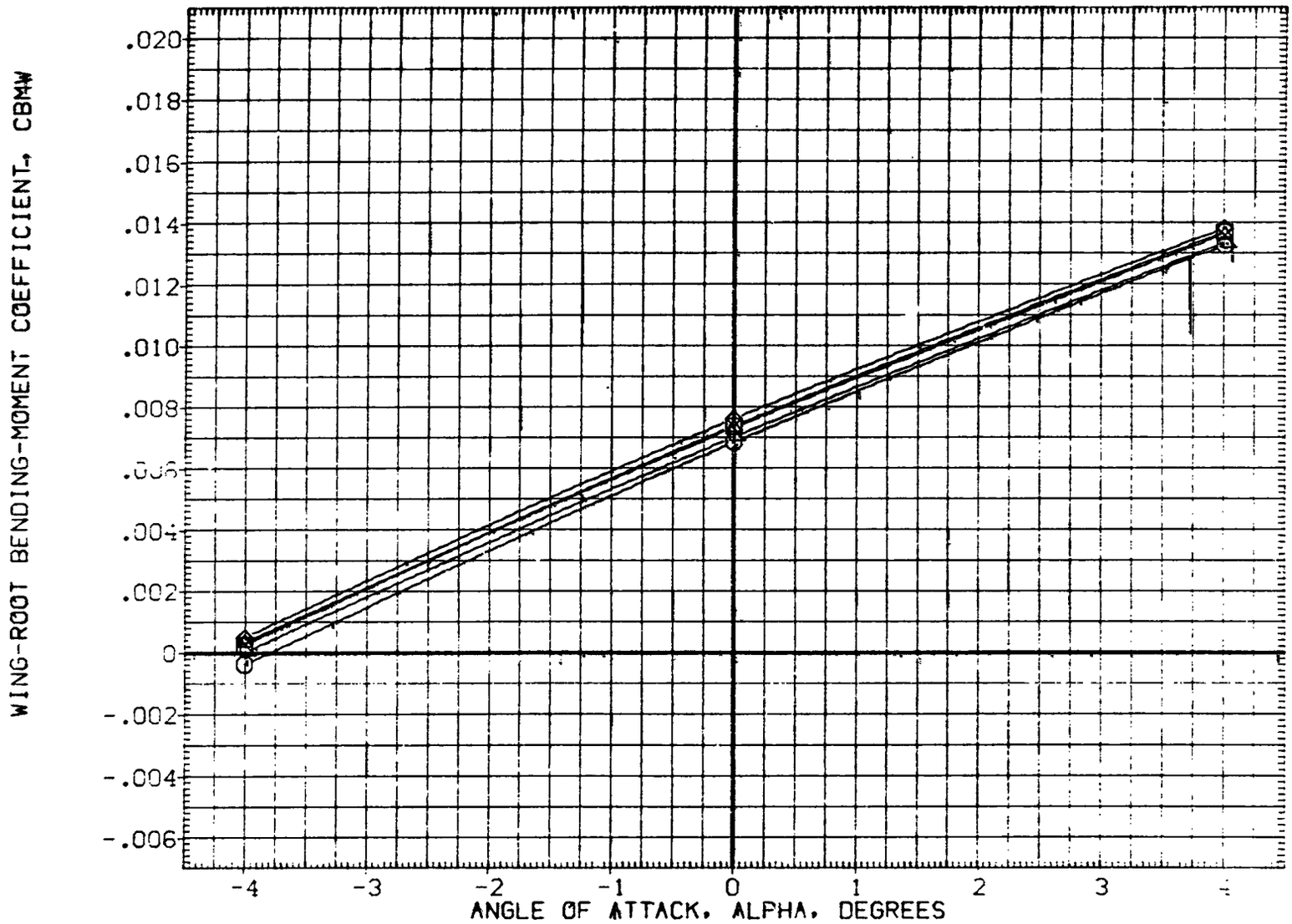


FIG.29 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-1B	ELV-OB	MACH	PT
(REEX35)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(REEX51)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.000	30.700
(REEX69)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.000	30.700
(REEX63)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.000	30.700
(REEX57)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

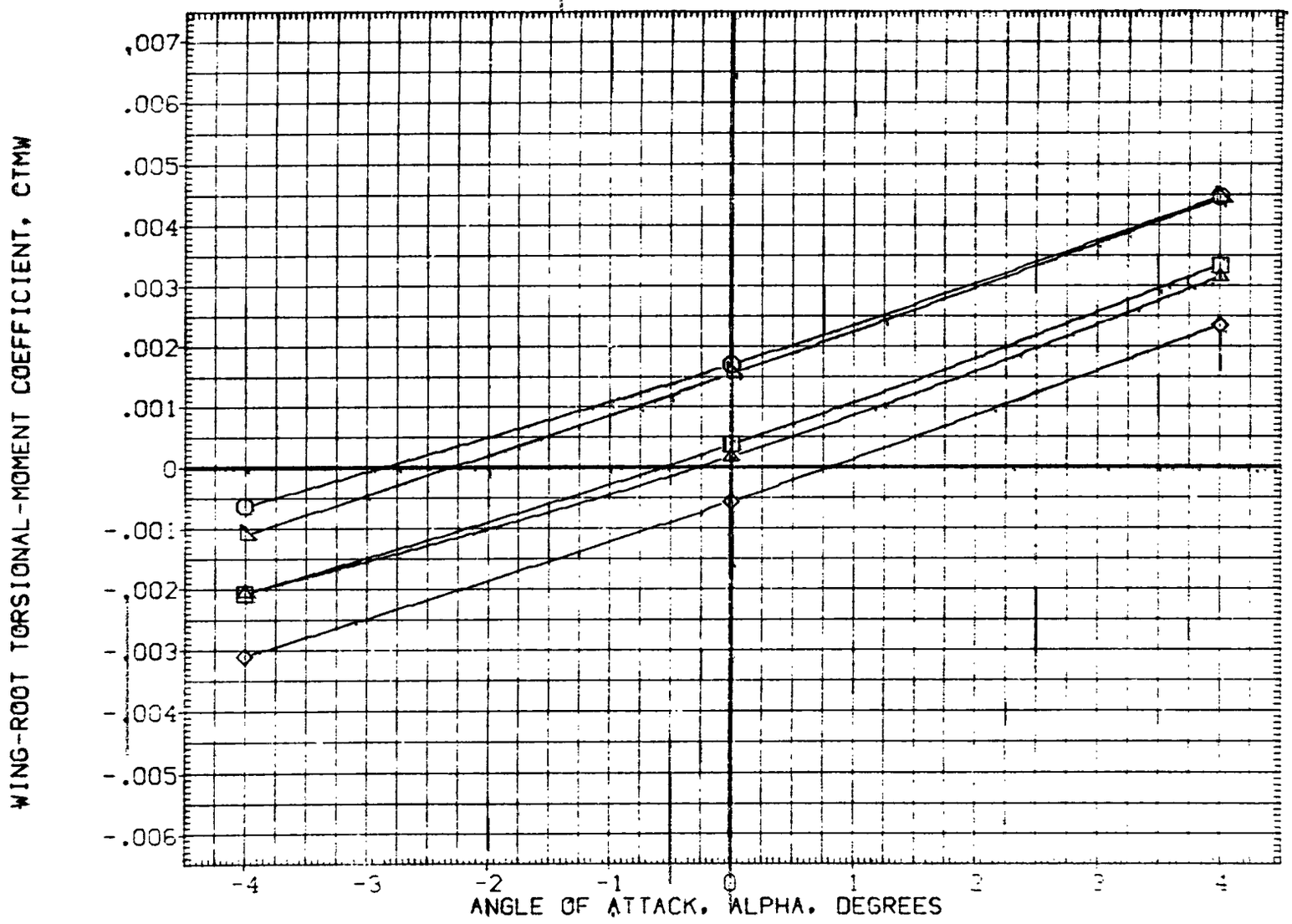


FIG.29 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X35)	□	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6X51)	◇	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.000	30.700
(RE6X69)	◇	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.000	30.700
(RE6X63)	△	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.000	30.700
(RE6X57)	▽	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	974.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	1.000	

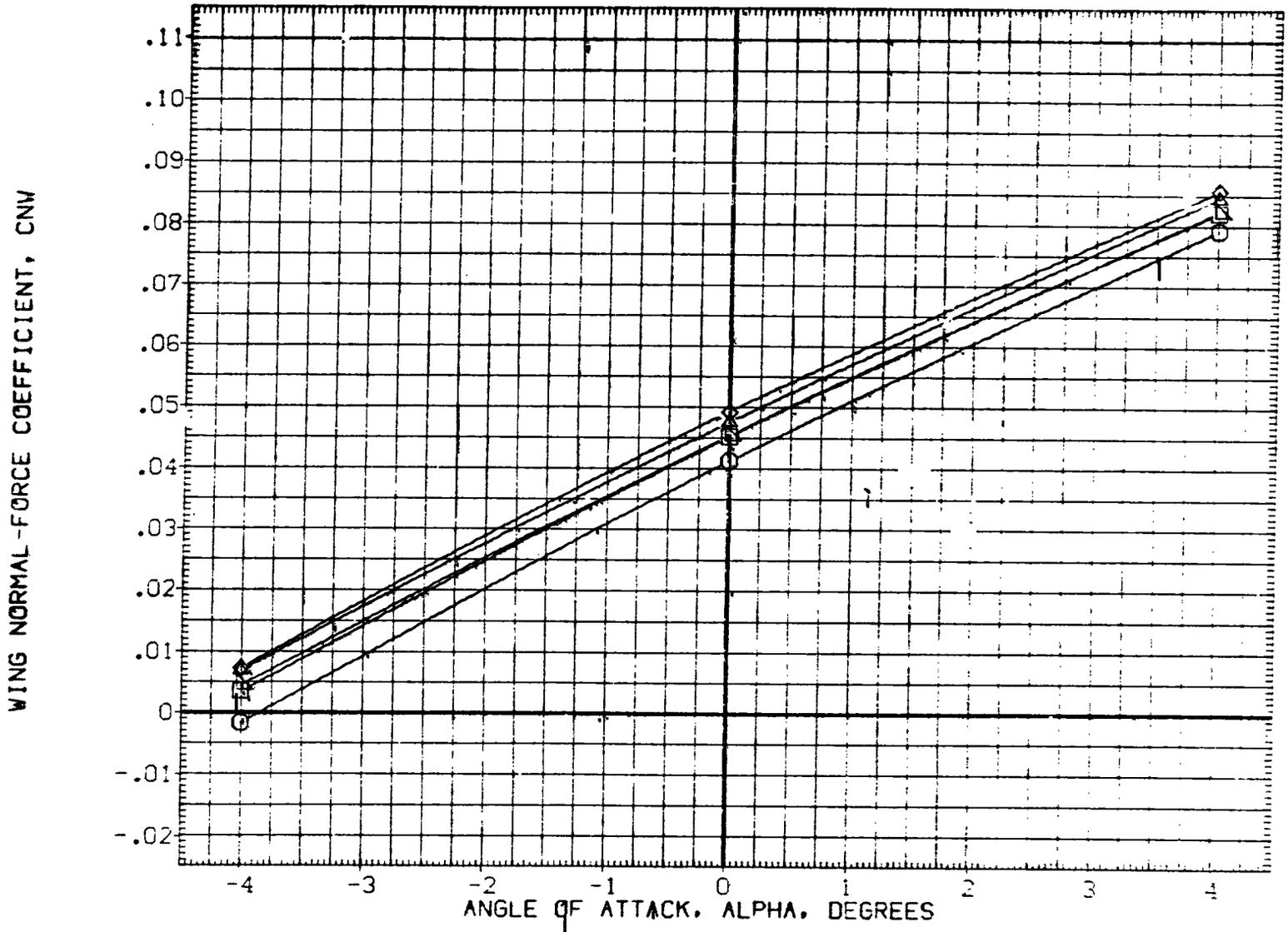


FIG.29 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	ALT
(RE6X35)	◇	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6X51)	□	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.000	30.700
(RE6X69)	△	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.000	30.700
(RE6X63)	○	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.000	30.700
(RE6X57)	▽	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION

SREF	2891.0000	SQ.FT.
LREF	1090.3000	IN.
BREF	1090.3000	IN.
XMRP	952.0000	IN. FS
YMRP	.0000	IN. BL
ZMRP	400.0000	IN. BT
SCALE	.0100	

WING CENTER-OF-PRESSURE, LONGITUDINAL LOCATION, OVER LENGTH, XWCP/L

1.13
1.12
1.11
1.10
1.09
1.08
1.07
1.06
1.05
1.04
1.03
1.02
1.01
1.00
.99

-4 -3 -2 -1 0 1 2 3 4

ANGLE OF ATTACK, ALPHA, DEGREES

FIG.29 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.0

(A)BETA = .00

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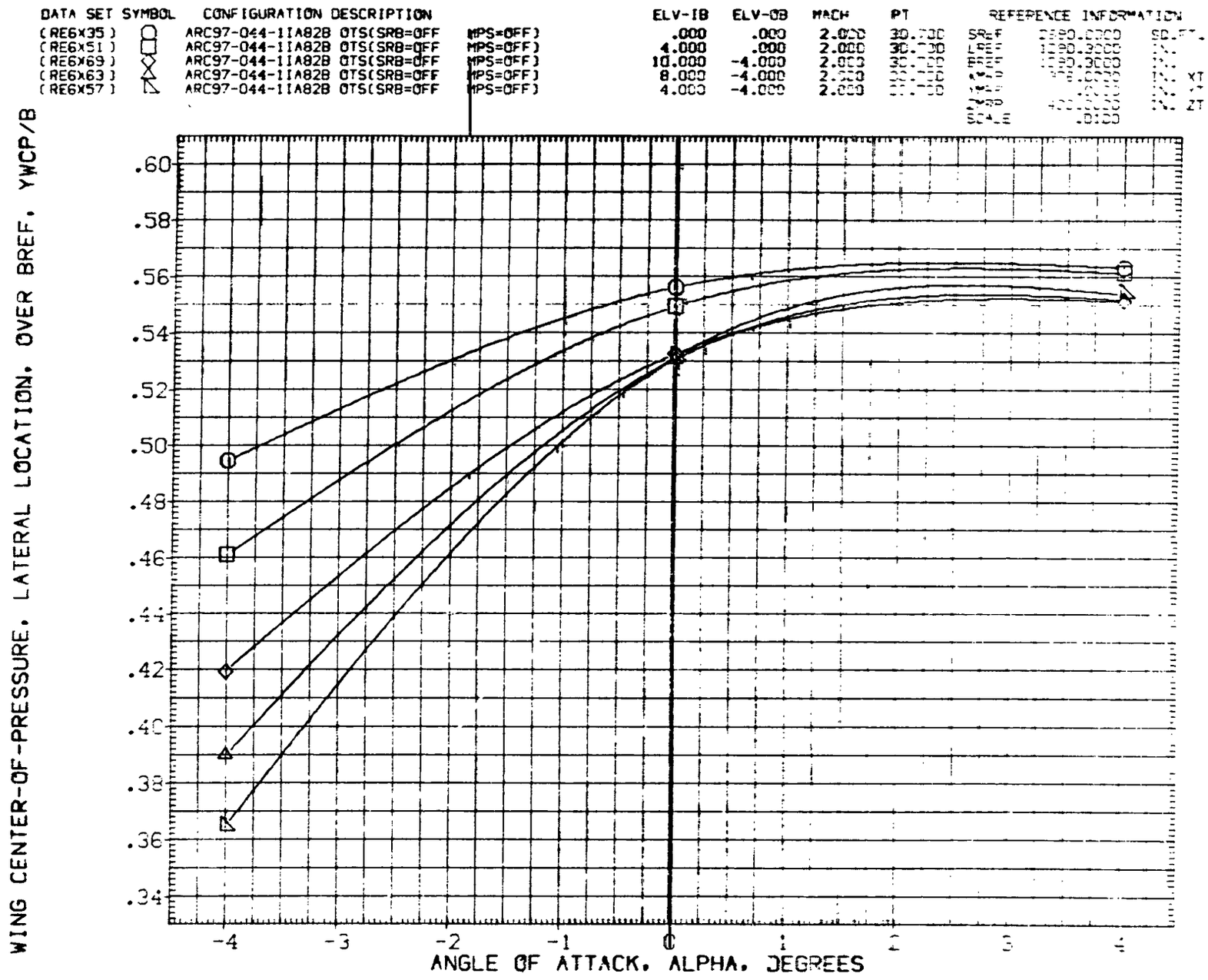


FIG.29 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.0

(A)BETA = .00

DATA SET & RUN	CONFIGURATION DESCRIPTION		ELV-LE	ELV-GE	MACH	PT	REFERENCE INFORMATION		
RE6X6( )	AR197-044-11A62B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.520	30.700	SREF	2871.0000	SQ.FT.
RE6X6( )	AR197-044-11A62B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.520	30.700	LREF	1196.0000	FT.
RE6Y( )	AR197-044-11A62B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.520	30.700	BREF	1196.0000	FT.
RE6A6( )	AR197-044-11A62B OTS(SRB=OFF	MPS=OFF)	6.000	-4.000	2.520	30.700	XMRP	979.5000	FT. XT
RE6Y9( )	AR197-044-11A62B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.520	30.700	YMRP	.0000	FT. YT
							ZMRP	400.0000	FT. ZT
							SCALE	1.0100	

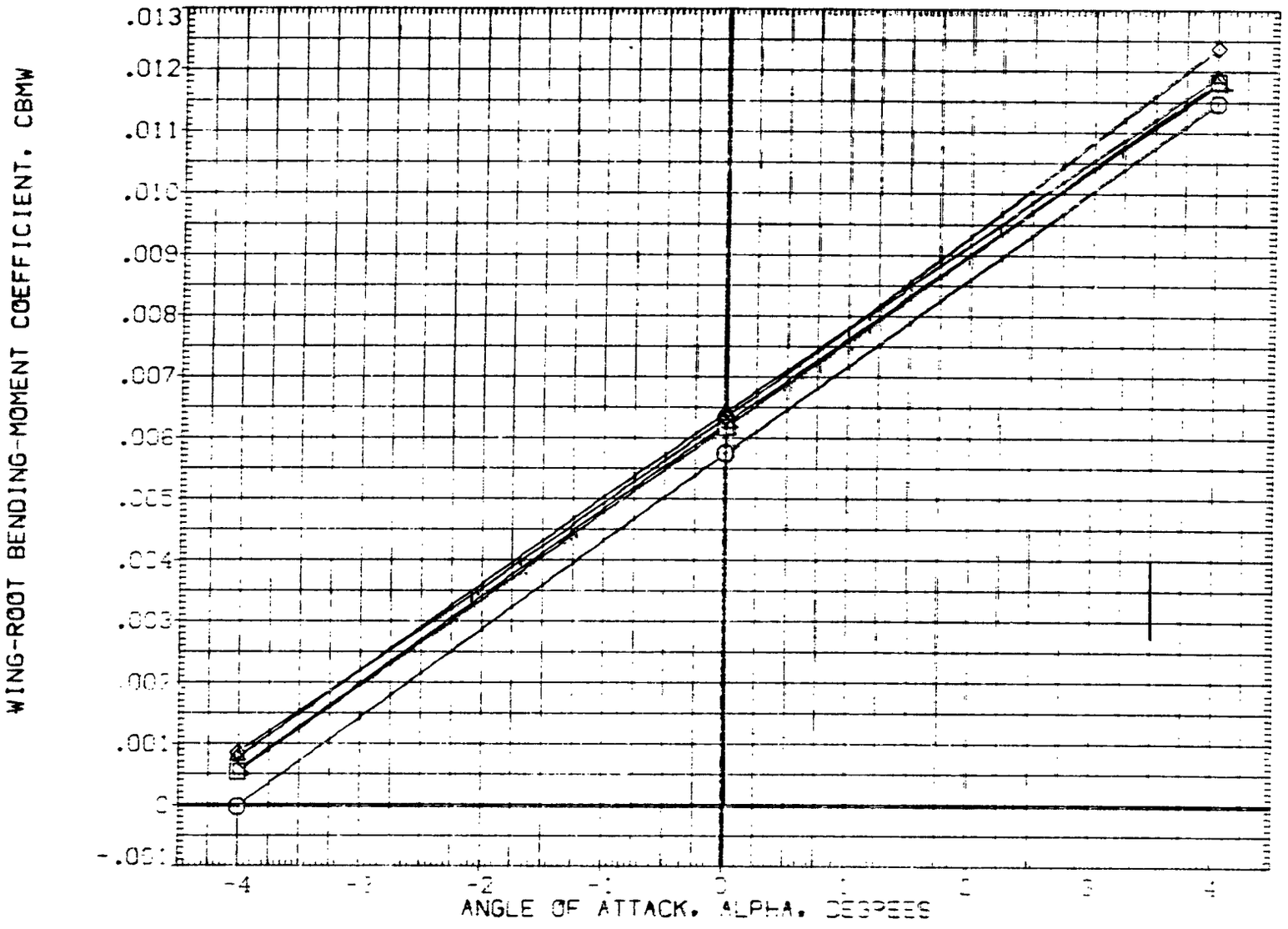


FIG.30 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.52

CA(BETA = .00)

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	RT
(RE6x42)	□	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700
(RE6x53)	◇	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.200	30.700
(RE6x71)	△	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.200	30.700
(RE6x65)	▽	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.200	30.700
(RE6x59)	◁	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION

SREF	2880.0000	SQ.FT.
LREF	1080.0000	IN.
BREF	1080.0000	IN.
XMRP	936.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

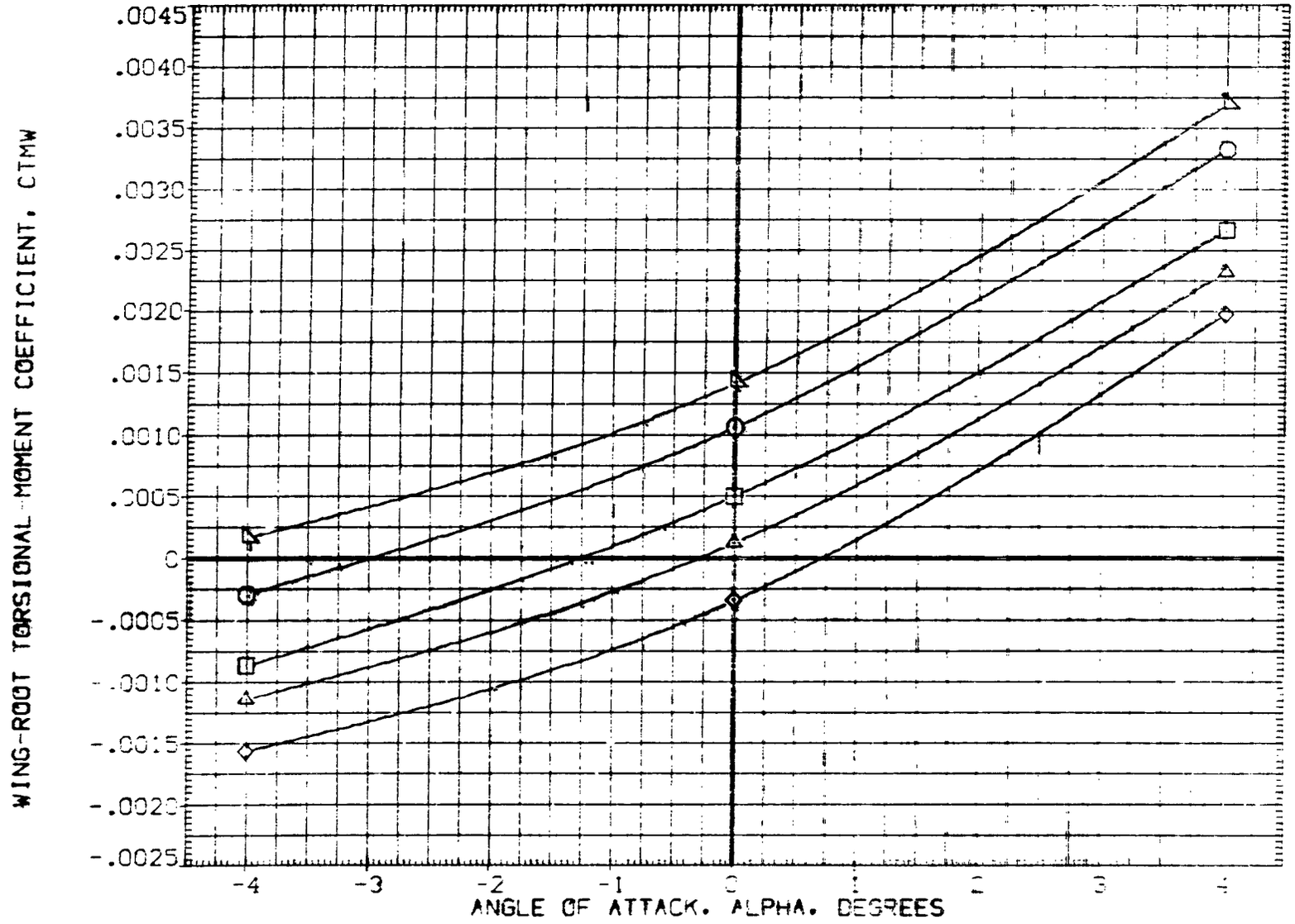


FIG.30 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.2

(A)BETA = .00

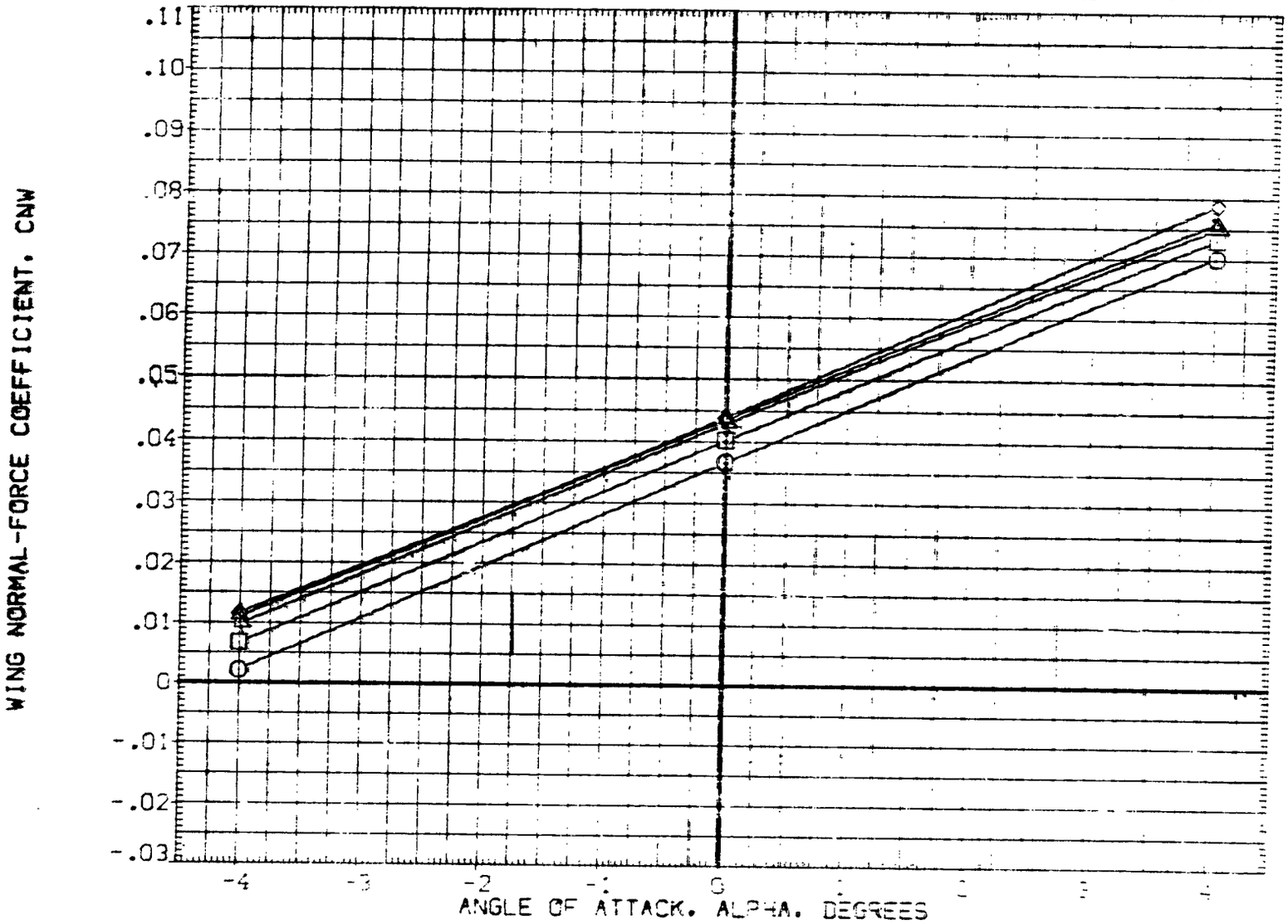


FIG.30 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, FLAP DEF, MACH = 2.2

CA)BETA = .00

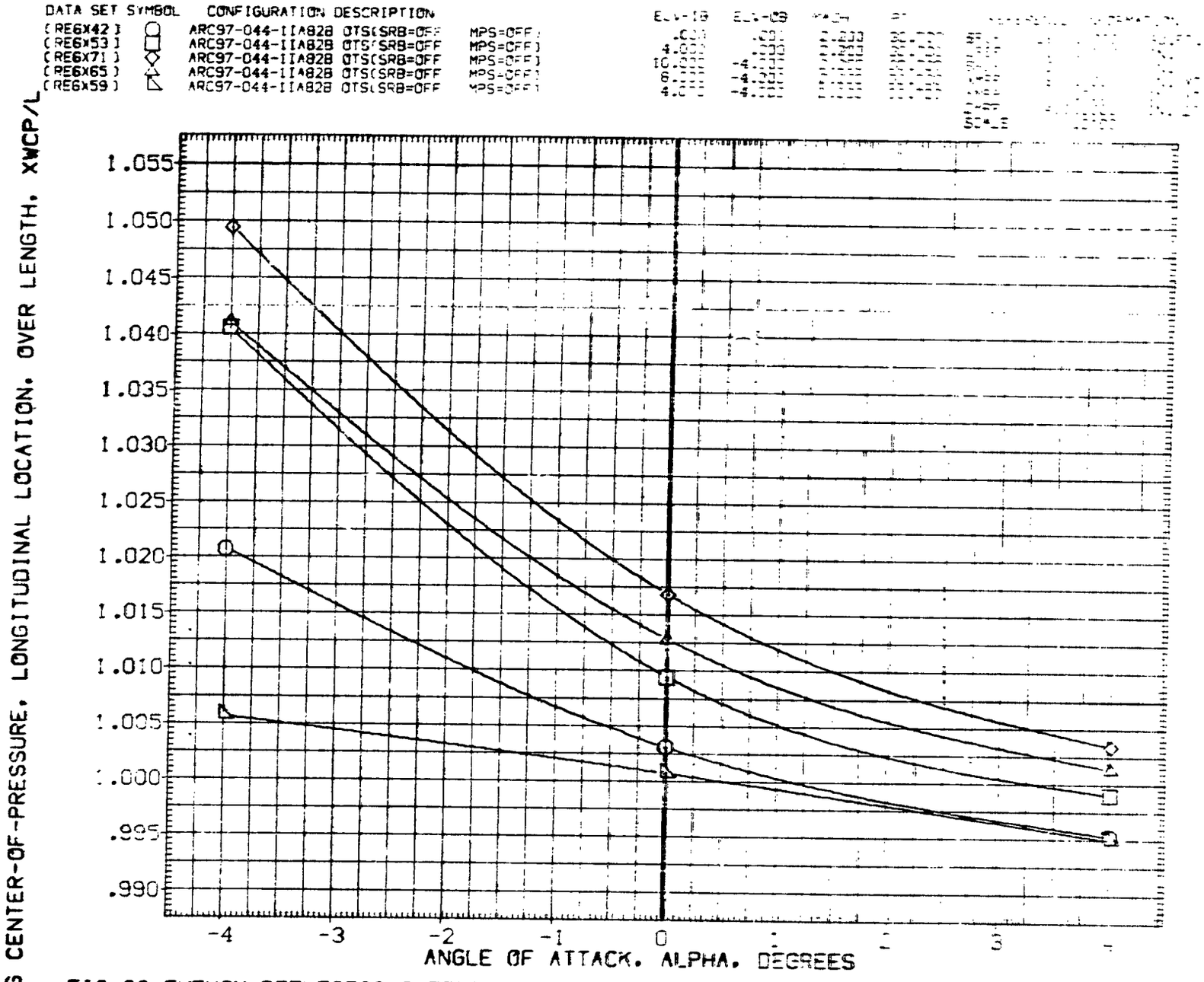


FIG.30 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER OFF, MACH = 2.2

(A)BETA = .00

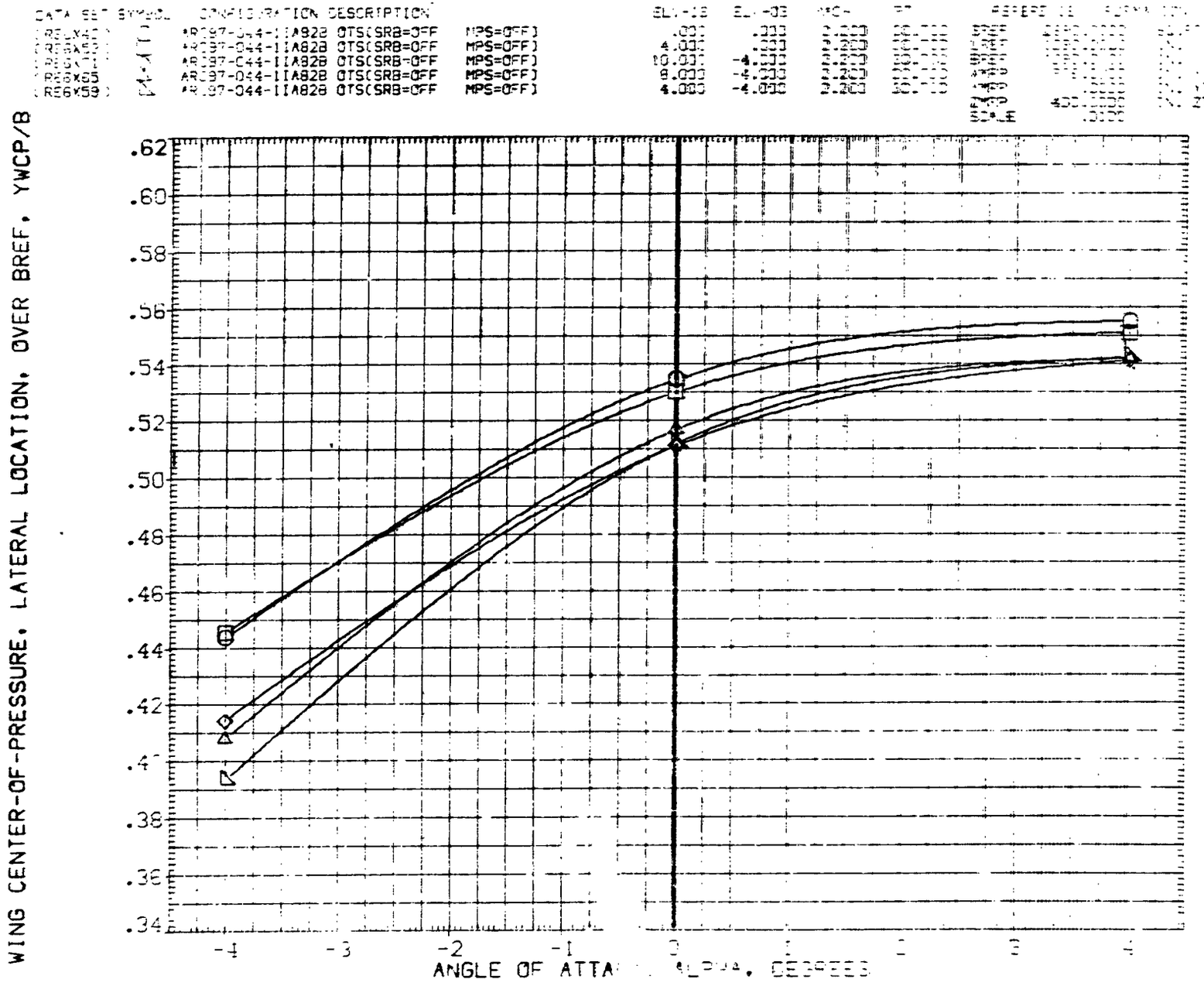


FIG.30 ELEVON DEFLECTIONS EFFECT ON WING LOADS

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X28)	◇	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(RE6X49)	□	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700
(RE6X67)	△	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6X61)	▽	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6X55)	◁	ARC97-044-IIA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1980.0000	IN.
BREF	780.0000	IN.
XMRP	1452.0000	IN. FM
YMRP	0.0000	IN. BL
ZMRP	400.0000	IN. WL
SCALE	.0100	

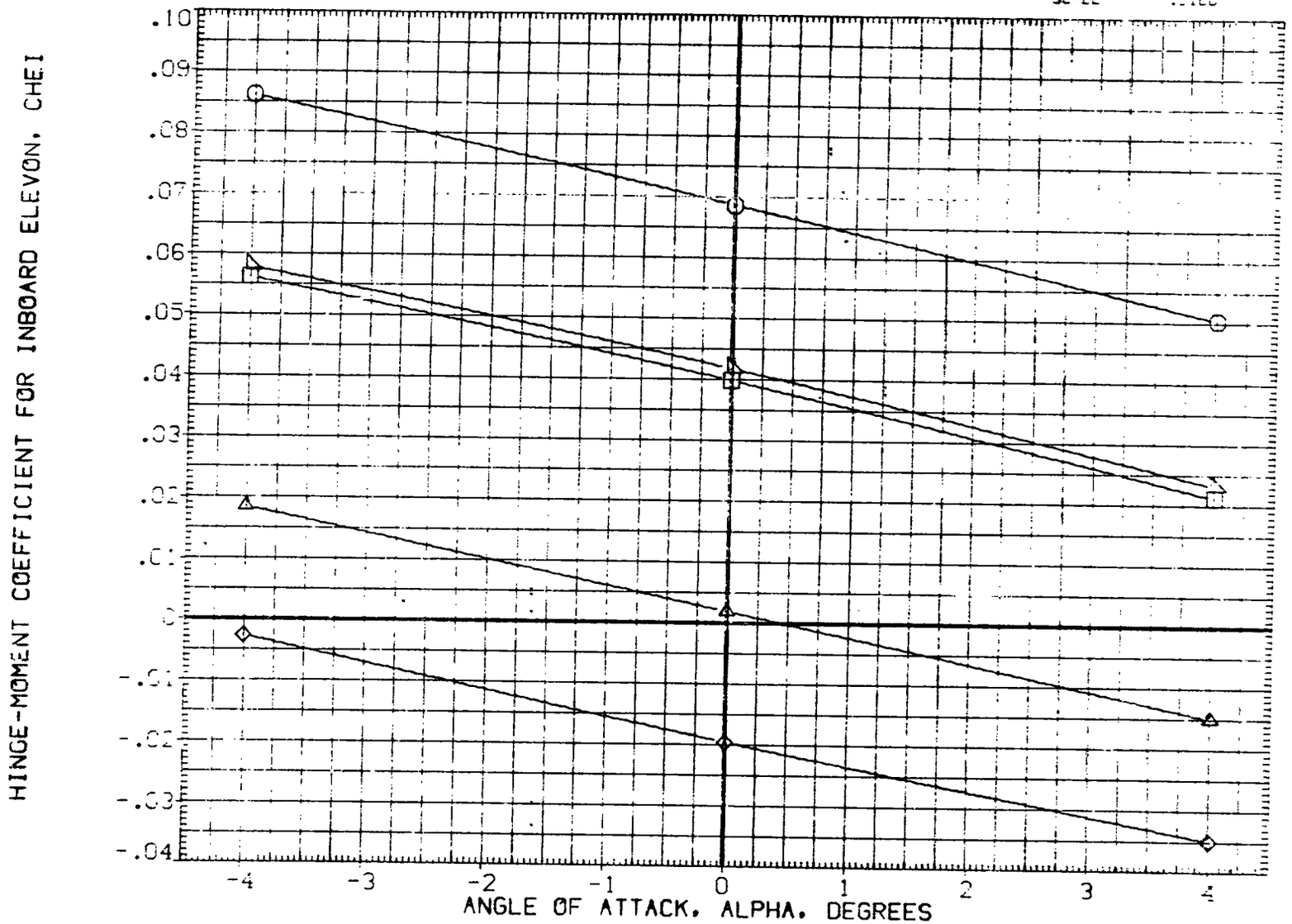


FIG.31 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER OFF, MACH =1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	P	REFERENCE INFORMATION		
(RE6X28)	□	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700	SREF	2690.0000	SQ.FT.
(RE6X49)	◇	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700	LREF	1290.3000	IN.
(RE6X67)	△	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700	BREF	1290.3000	IN.
(RE6X61)	○	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700	XMRP	975.0000	IN. XT
(RE6X55)	▽	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700	YMRP	.0000	IN. YT
								ZMRP	400.0000	IN. ZT
								SCALE	.0100	

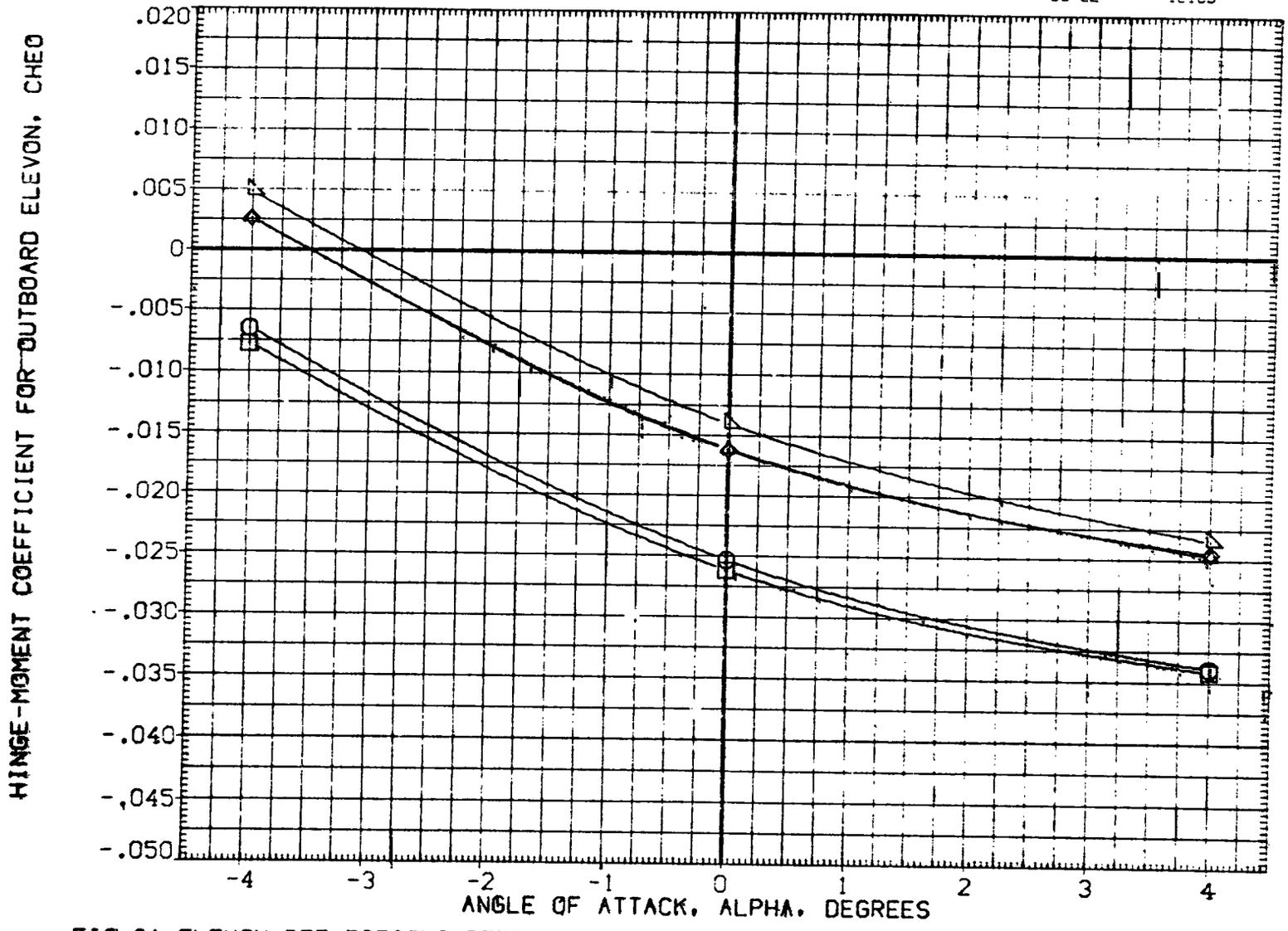


FIG.31 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER OFF, MACH =1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X35)	□	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6X51)	○	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.000	30.700
(RE6X69)	△	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.000	30.700
(RE6X63)	◇	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.000	30.700
(RE6X57)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION

SREF [illegible]
BREF [illegible]
CREF [illegible]
XMRP [illegible]
YMRP [illegible]
ZMRP [illegible]
SCALE [illegible]

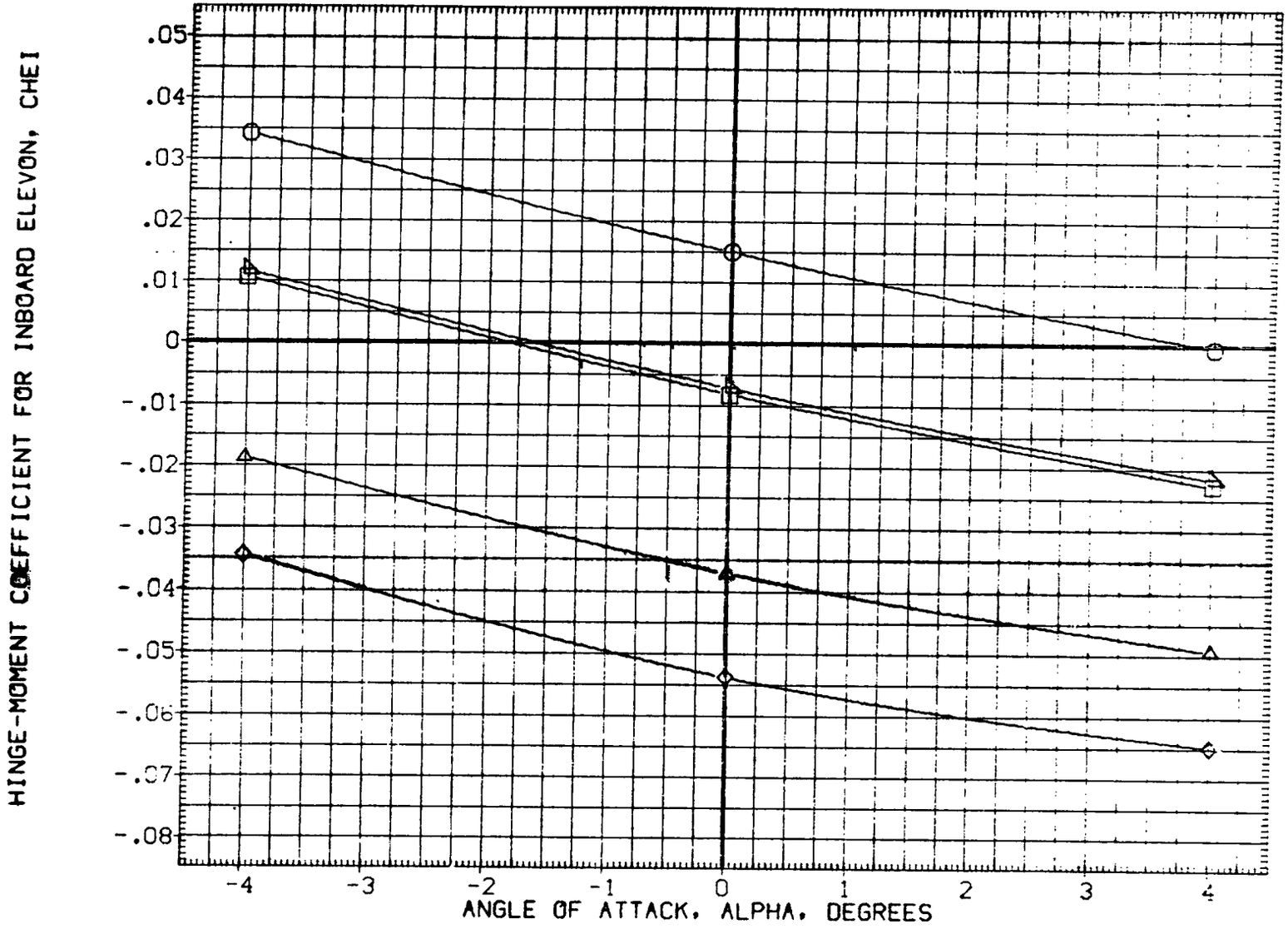


FIG.32 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER OFF, MACH =2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X35)	□	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6X51)	□	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	4.000	.000	2.000	30.700
(RE6X69)	⊠	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	10.000	-4.000	2.000	30.700
(RE6X63)	⊠	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	8.000	-4.000	2.000	30.700
(RE6X57)	◿	ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. FS
YMRP	.0000	IN. BL
ZMRP	400.0000	IN. ZT
SCALE	.0100	

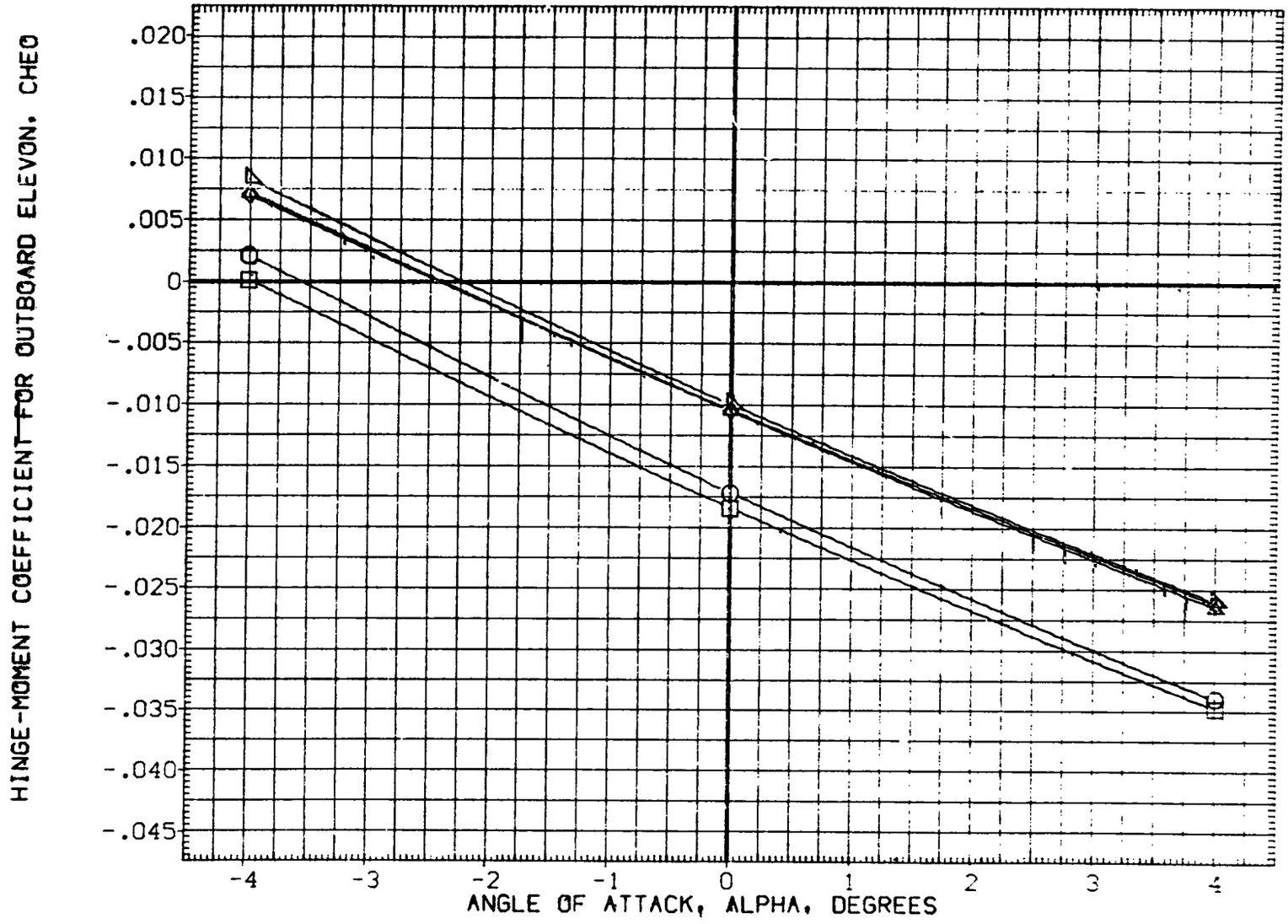


FIG.32 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER OFF, MACH =2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X42)	□	ARC97-044-1:A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700
(RE6X53)	○	ARC97-044-1:A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.200	30.700
(RE6X71)	◇	ARC97-044-1:A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.200	30.700
(RE6X65)	△	ARC97-044-1:A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.200	30.700
(RE6X59)	▽	ARC97-044-1:A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION

SREF	2688.0000	SQ.FT.
LREF	1291.2000	IN.
BREF	1756.8000	IN.
XMRP	978.4000	IN. FS
YMRP	.0000	IN. BL
ZMRP	410.0000	IN. WL
SCALE	.0100	

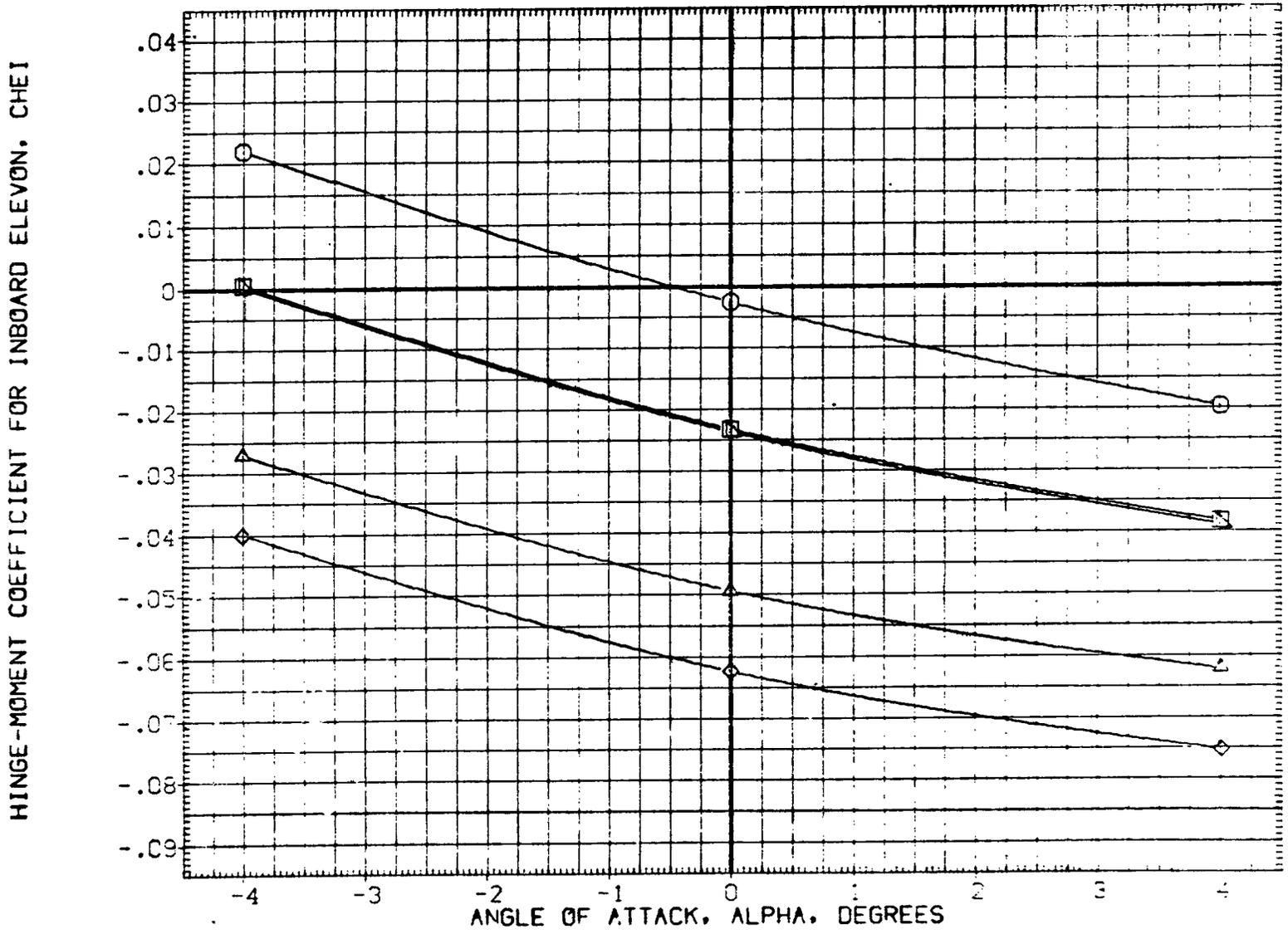


FIG.33 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER OFF, MACH =2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X42)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700
(RE6X53)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.200	30.700
(RE6X71)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.200	30.700
(RE6X65)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.200	30.700
(RE6X59)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

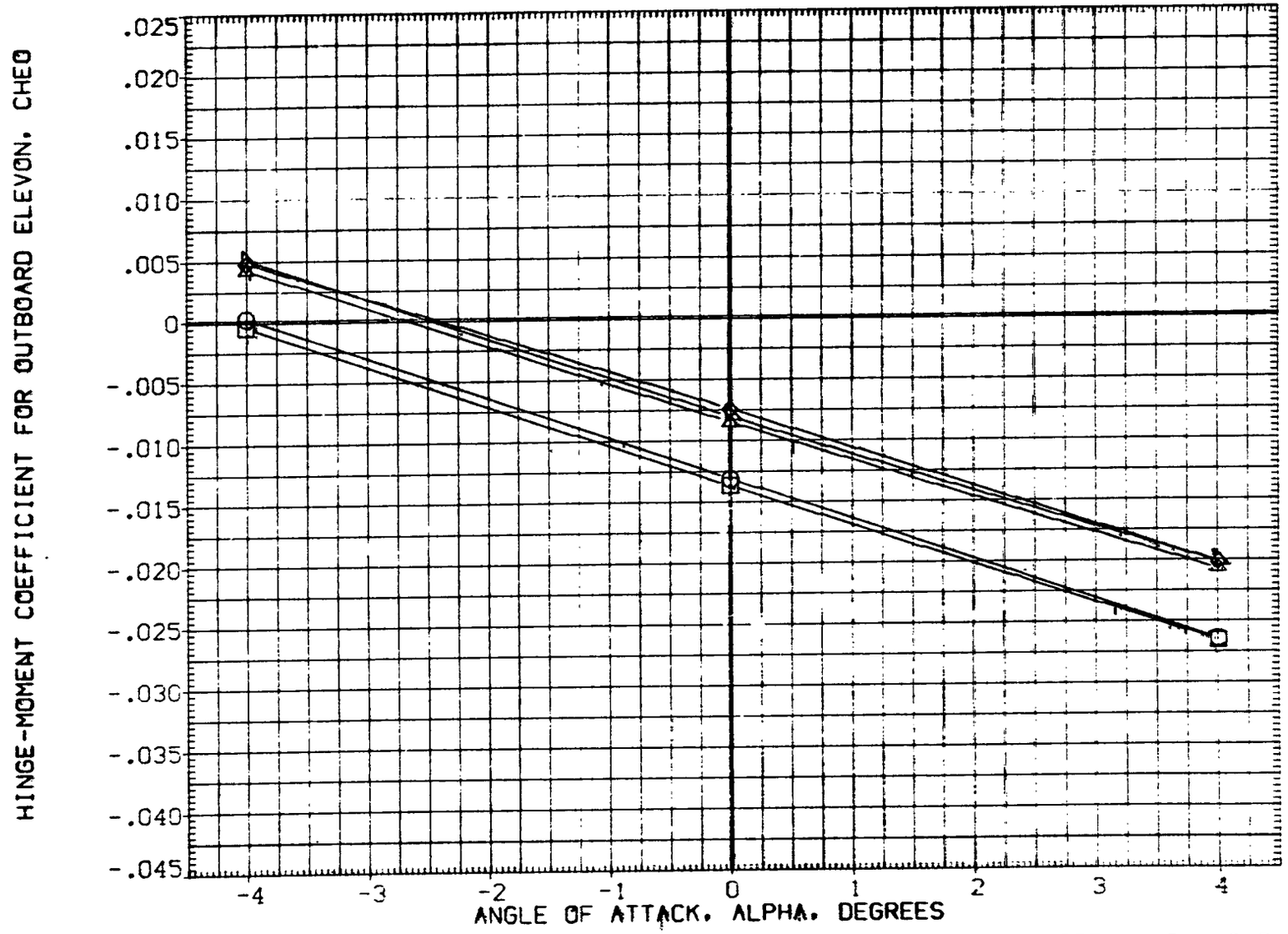


FIG.33 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER OFF, MACH =2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y28)	□	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(RE6Y49)	◇	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700
(RE6Y67)	△	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6Y81)	○	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6Y95)	⊠	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700

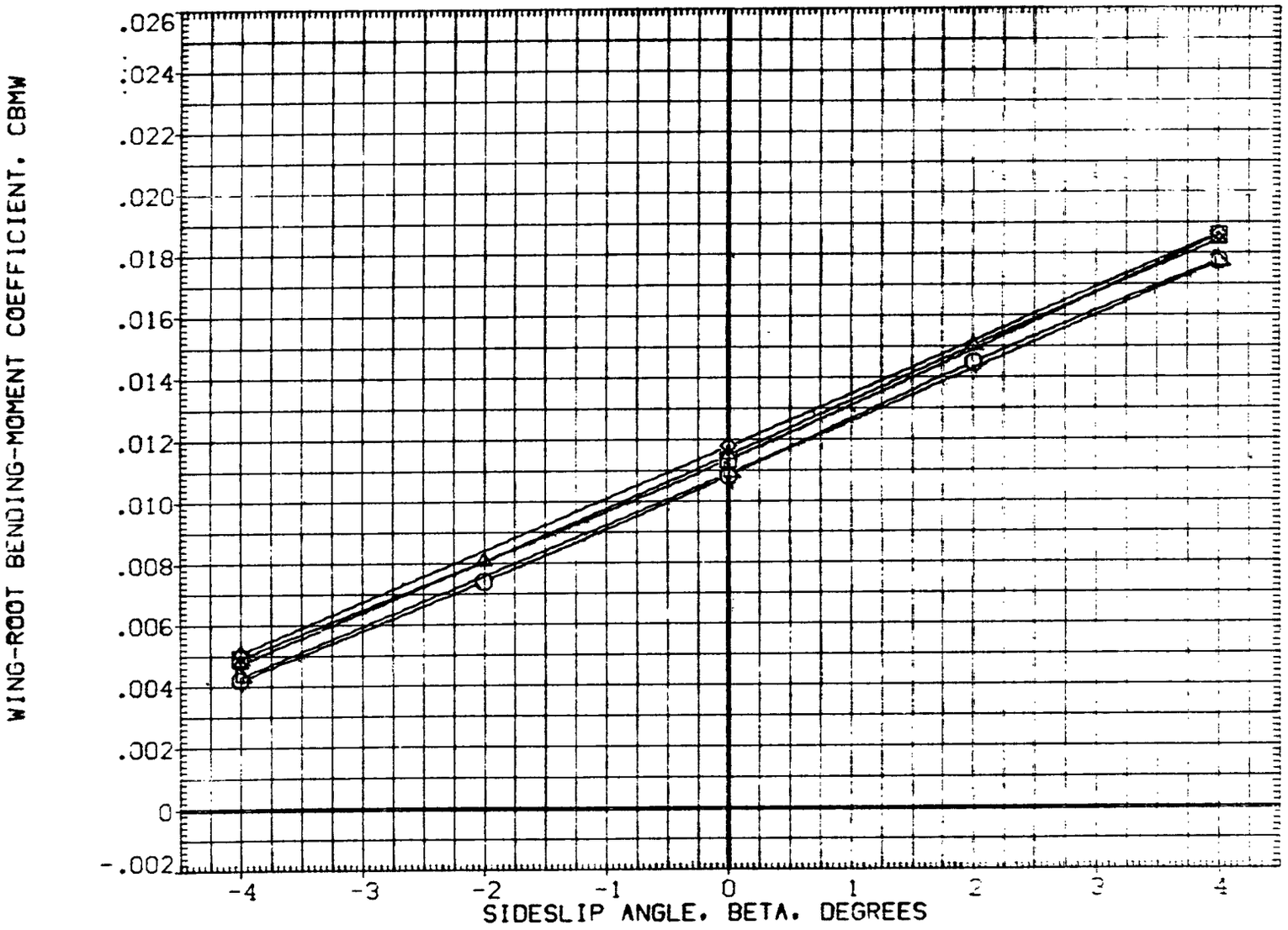


FIG.34 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y28)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.003	1.550	30.700
(RE6Y49)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700
(RE6Y67)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6Y61)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6Y55)		ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

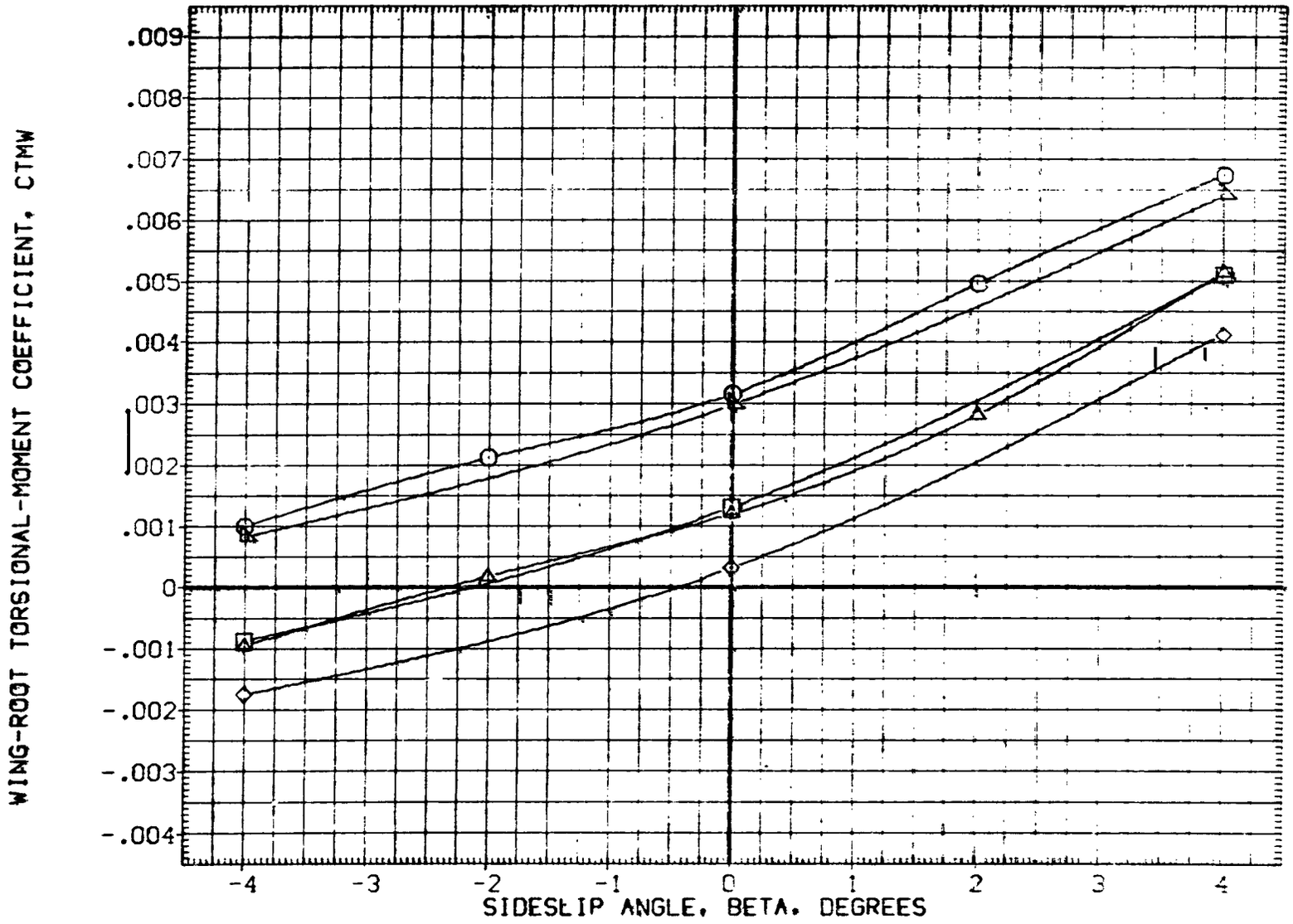


FIG.34 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y28)	◇	ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(RE6Y49)	△	ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700
(RE6Y67)	□	ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6Y61)	▽	ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6Y55)	○	ARC97-044-1IA828 OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.7000	SQ.FT.
LREF	1090.0000	IN.
BREF	1090.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

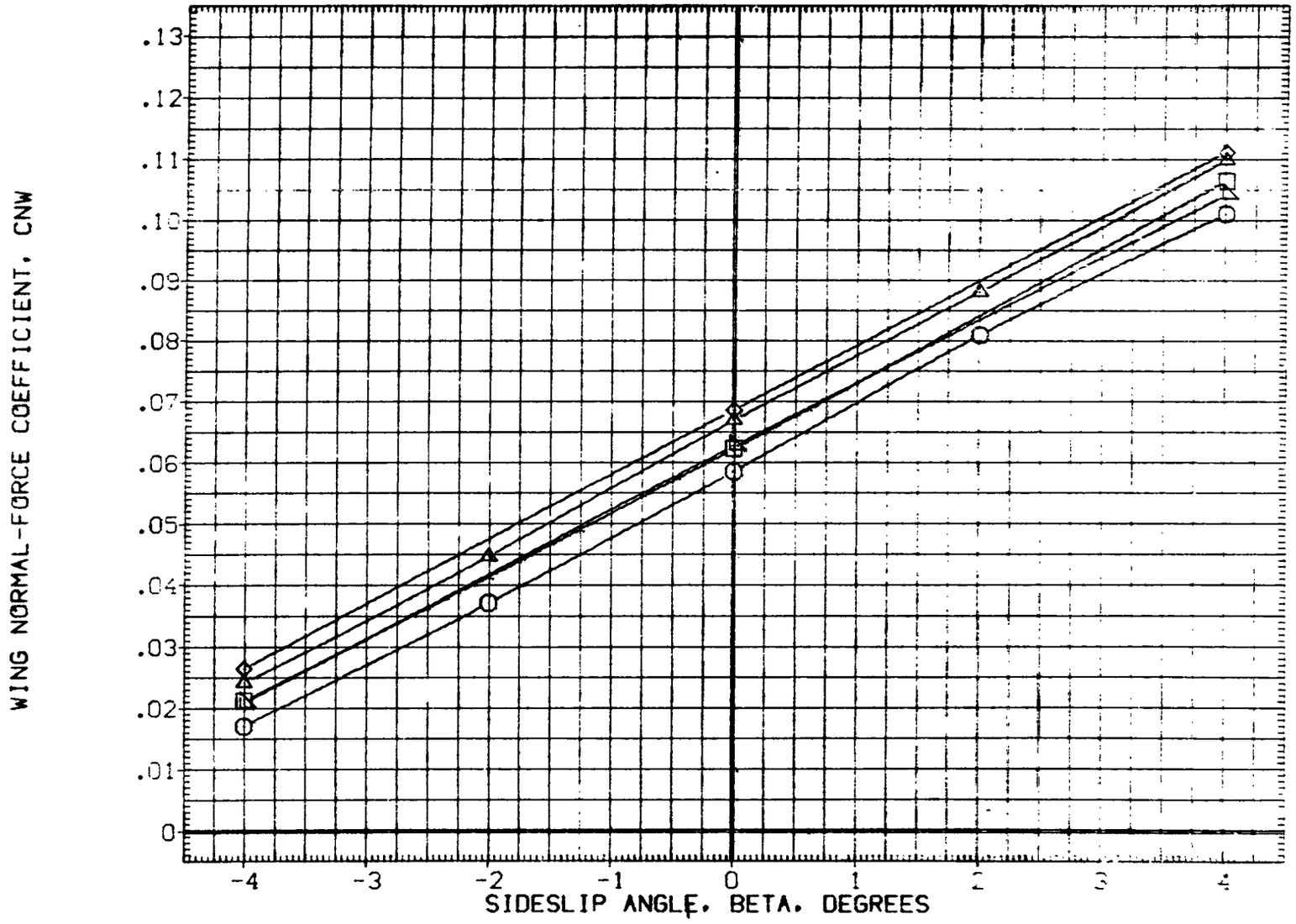


FIG.34 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y28)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(RE6Y49)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700
(RE6Y67)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6Y61)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6Y55)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

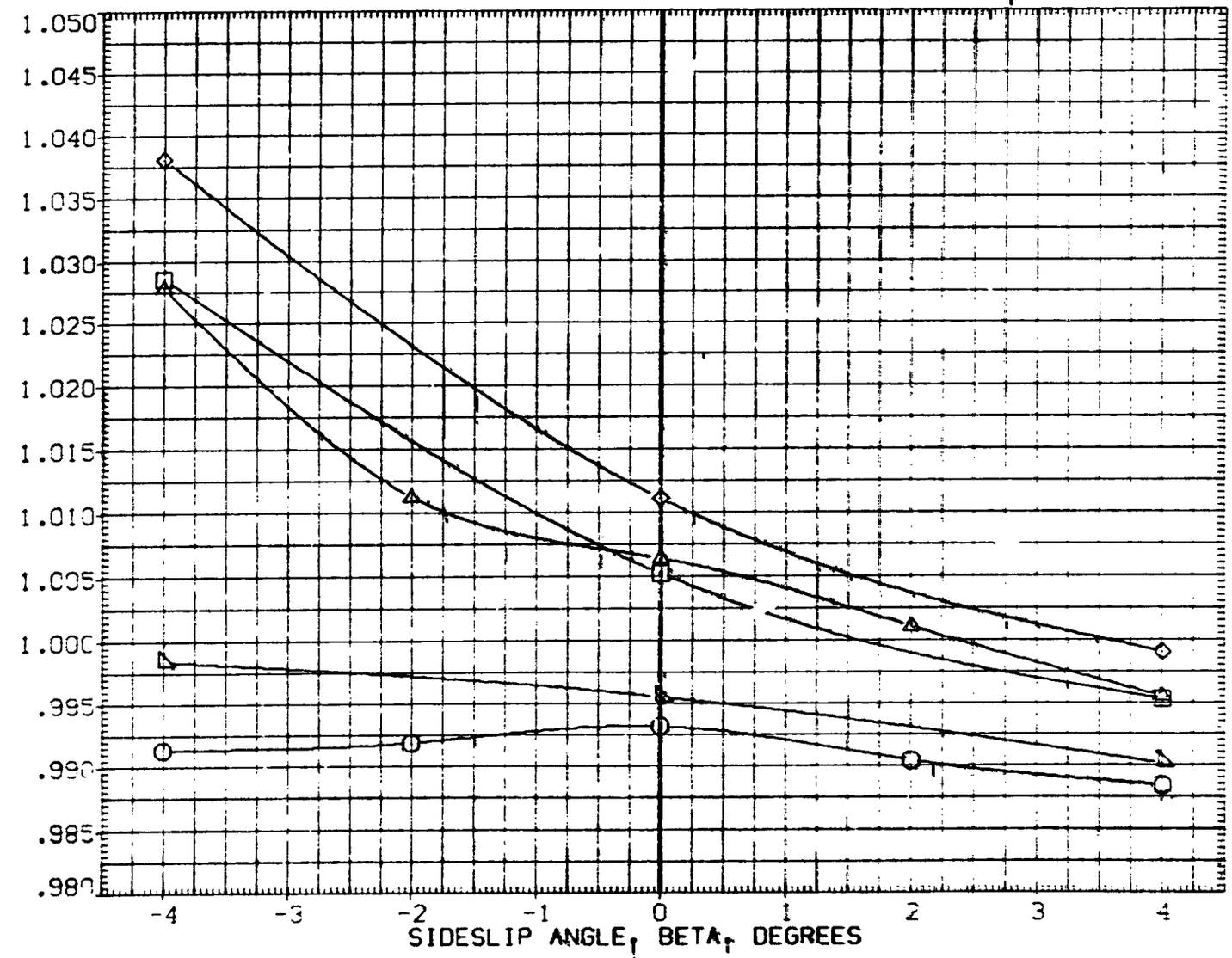


FIG.34 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 1.55

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		
(RE6Y28)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700	SREF	4660.0000	SQ.FT.
(RE6Y49)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700	BREF	1665.0000	IN.
(RE6Y67)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700	CREF	1665.0000	IN.
(RE6Y61)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700	XMRP	978.0000	IN. X
(RE6Y55)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700	YMRP	.0000	IN. Y
							ZMRP	400.0000	IN. Z
							SCALE	.0100	

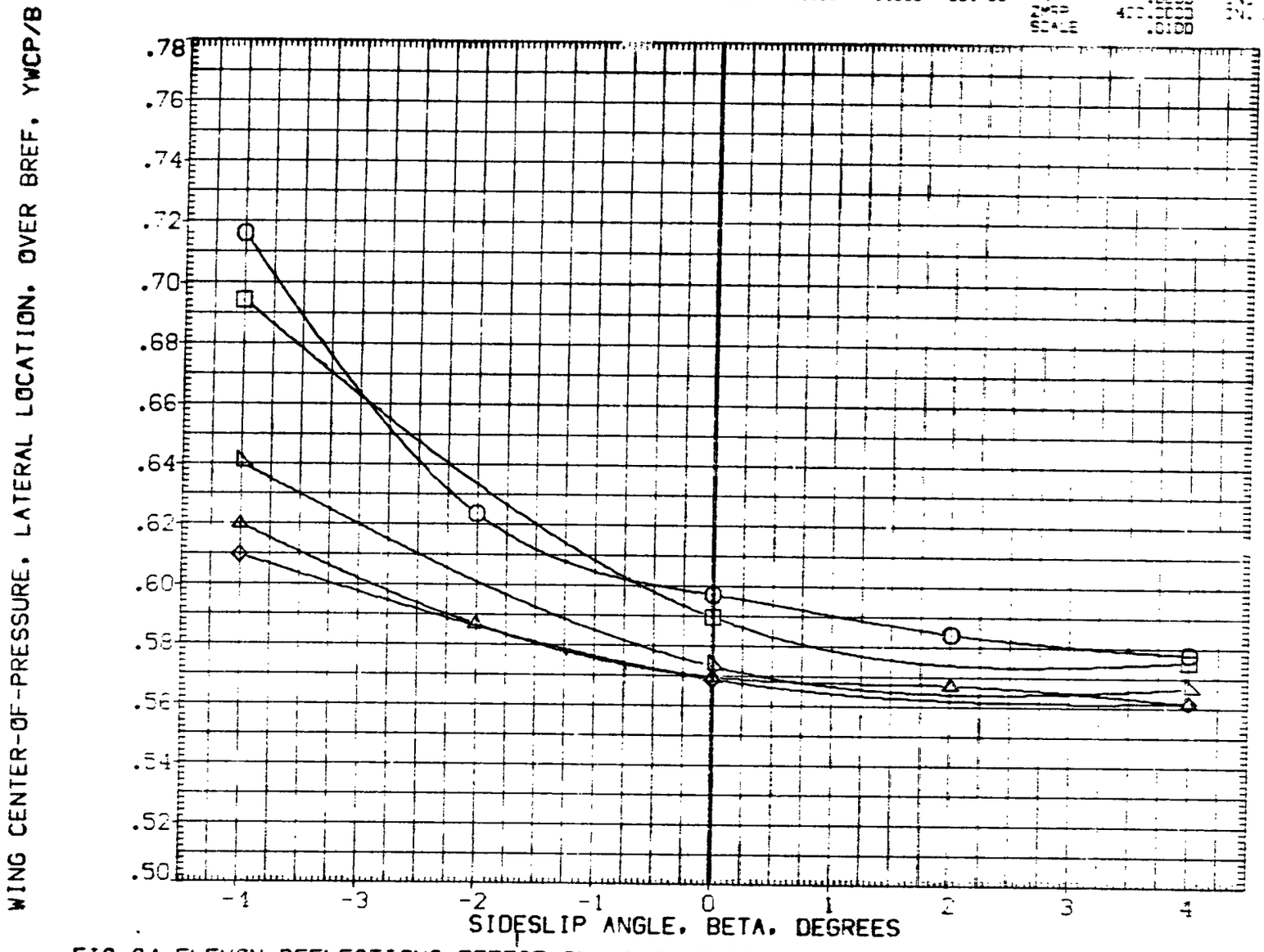


FIG.34 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y35)	□	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.000	30.700
(RE6Y51)	◇	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.000	30.700
(RE6Y69)	△	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.000	30.700
(RE6Y63)	○	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.000	30.700
(RE6Y57)	▽	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

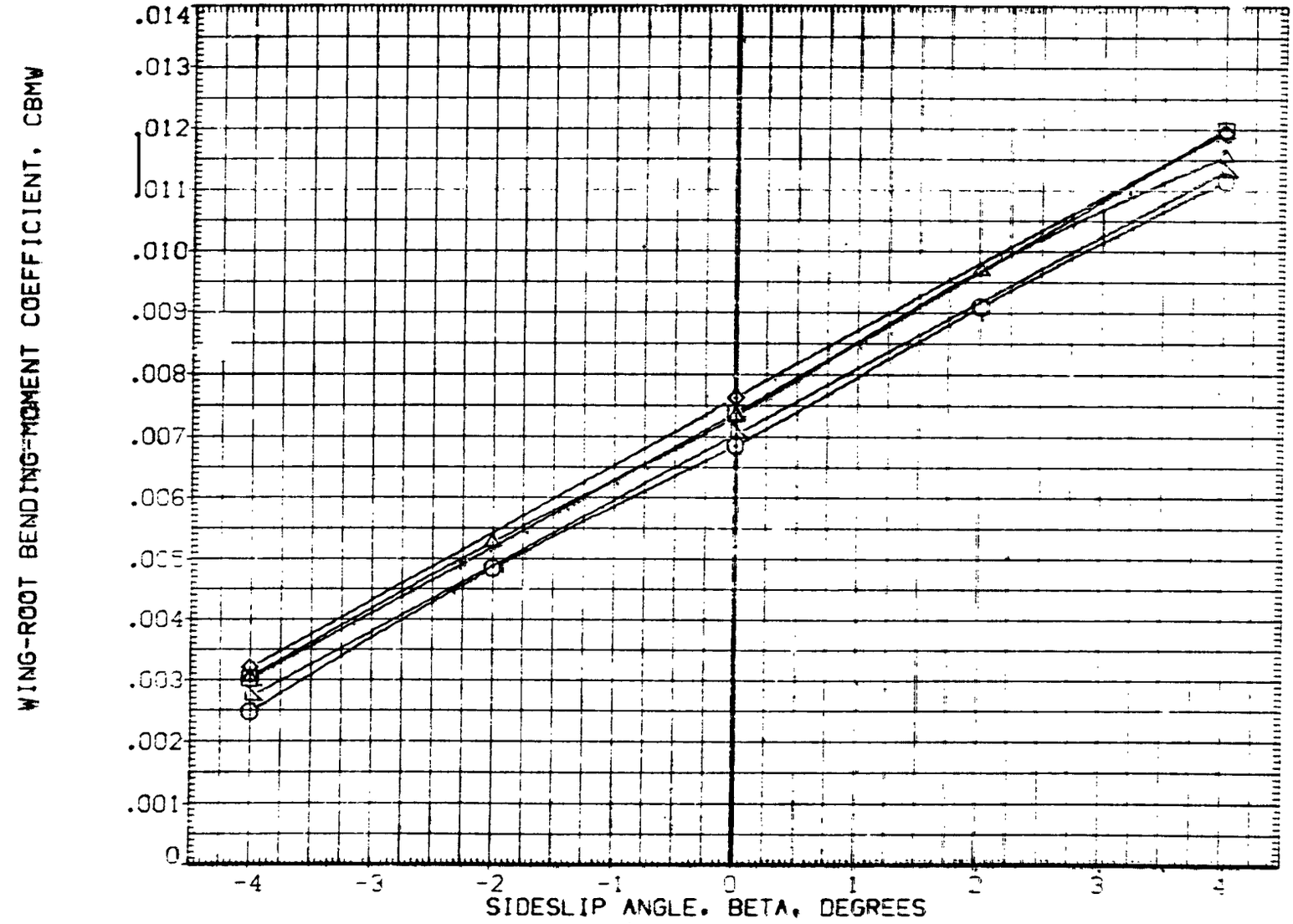


FIG.35 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.0

(A) ALPHA = .00

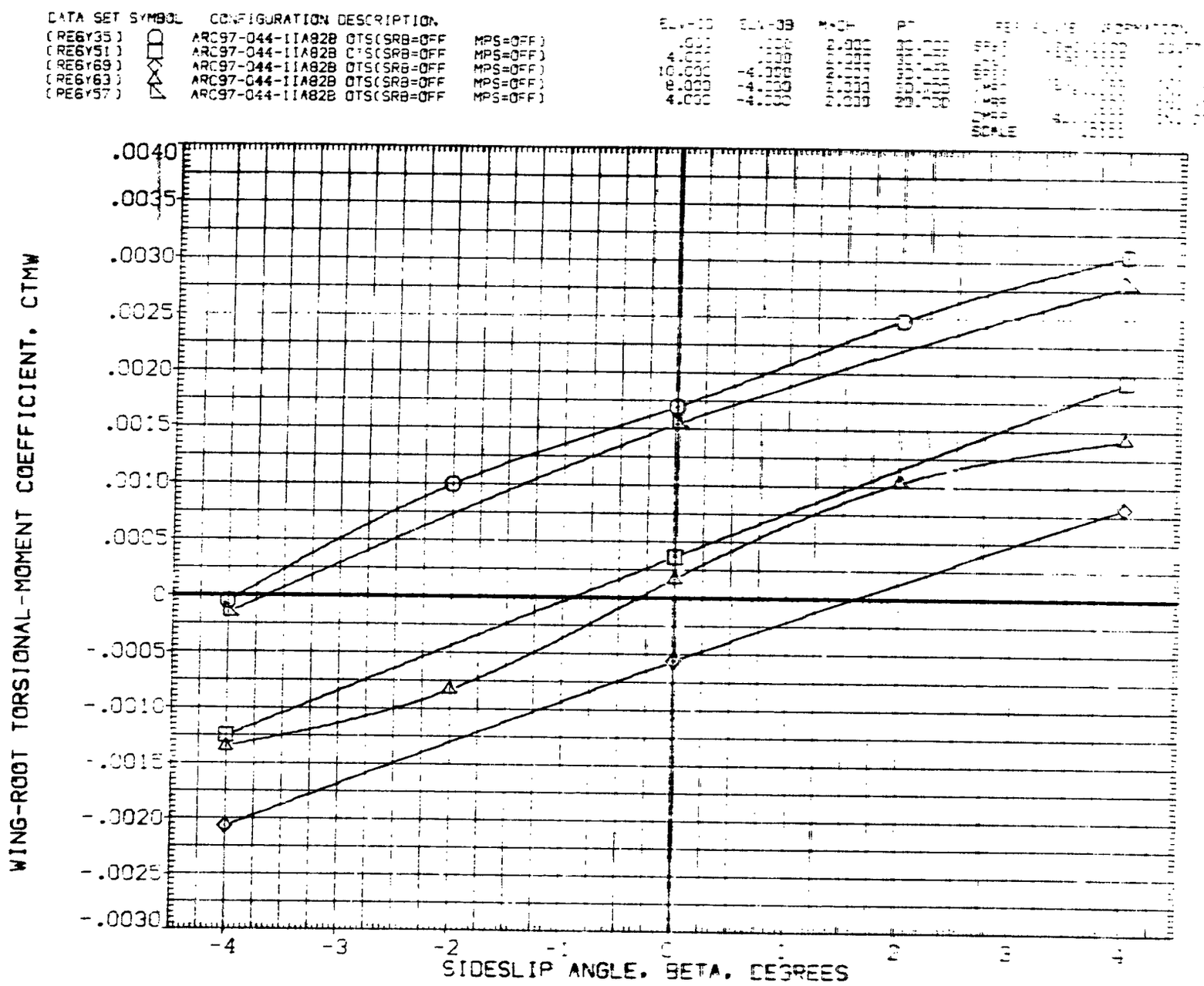


FIG.35 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.0

(A)ALPHA = .00

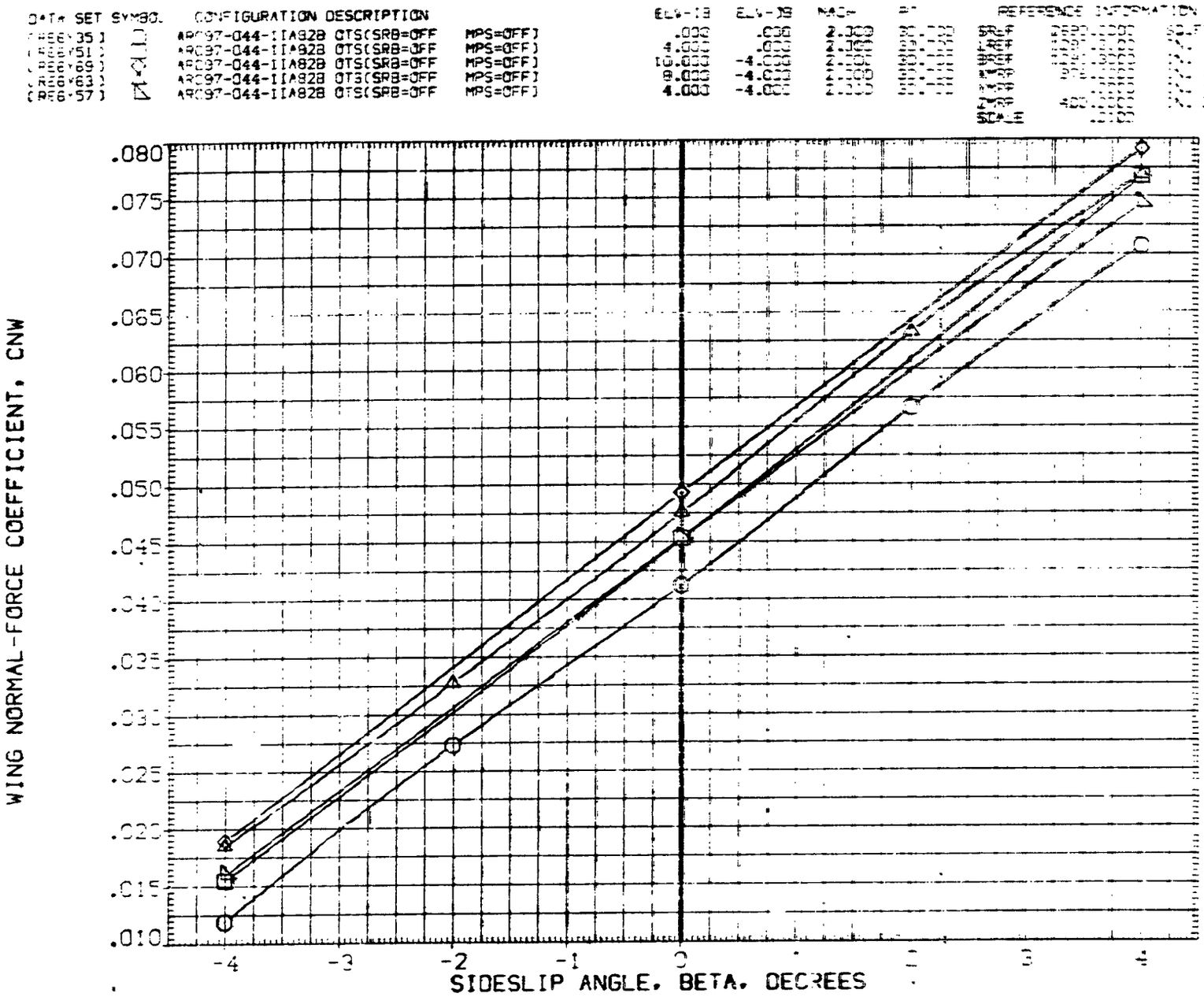


FIG.35 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.3

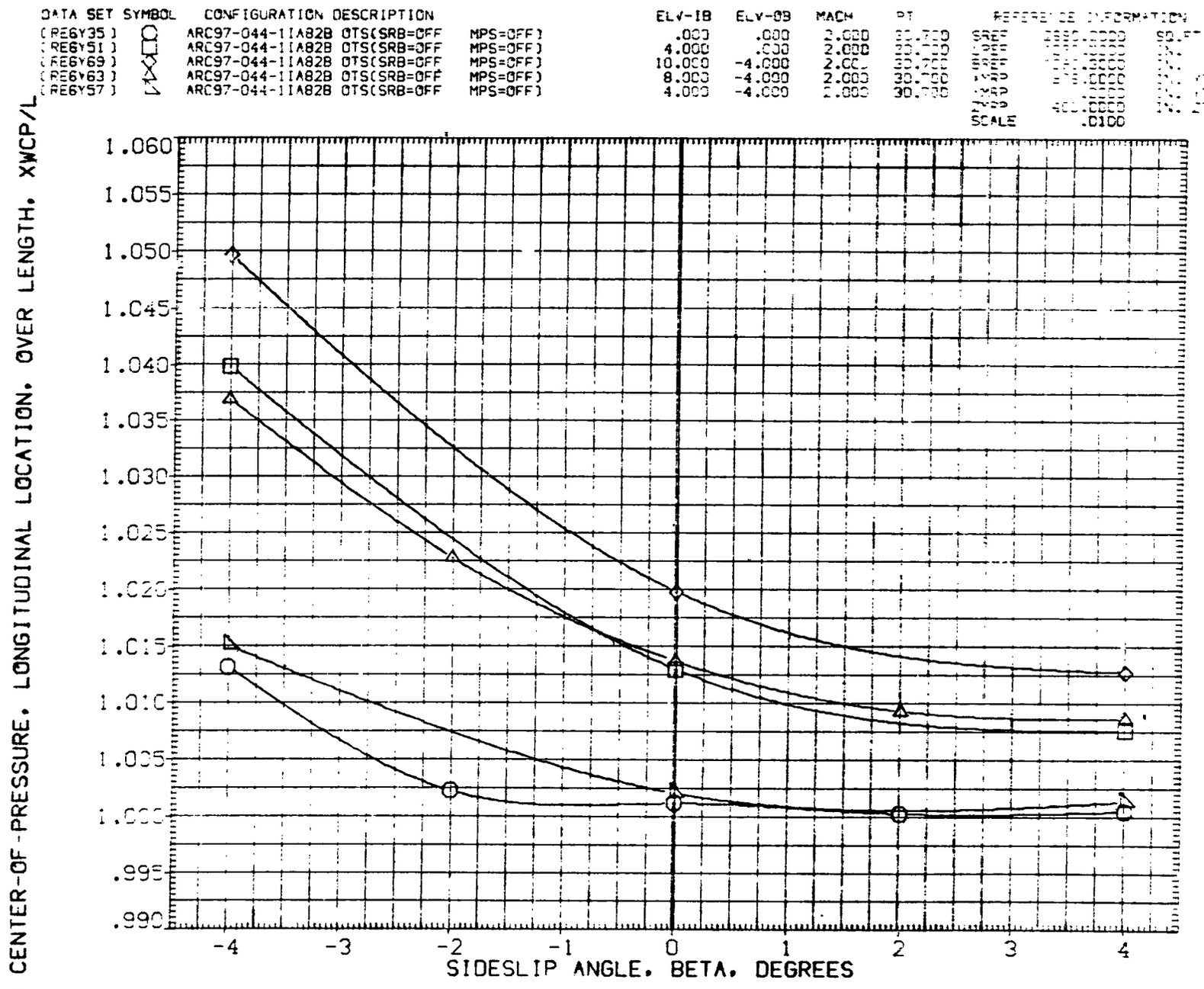


FIG.35 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.0

(A)ALPHA = .00

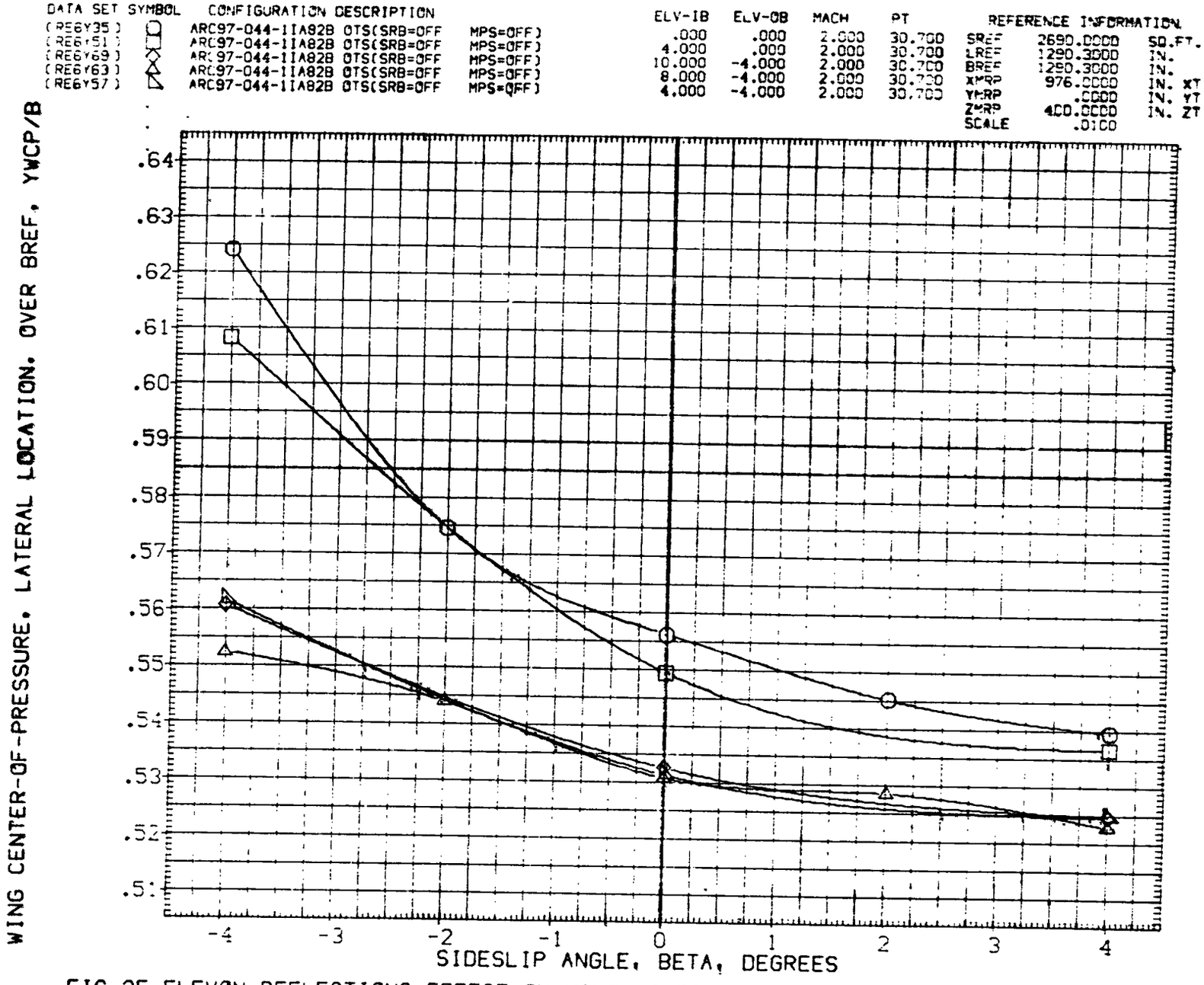


FIG.35 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y42)	□	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700
(RE6Y53)	◇	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.200	30.700
(RE6Y71)	⋈	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.200	30.700
(RE6Y65)	⋈	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.200	30.700
(RE6Y59)	△	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1230.3000	IN.
BREF	1230.3000	IN.
XMRP	875.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	410.0000	IN. ZT
SCALE	.0100	

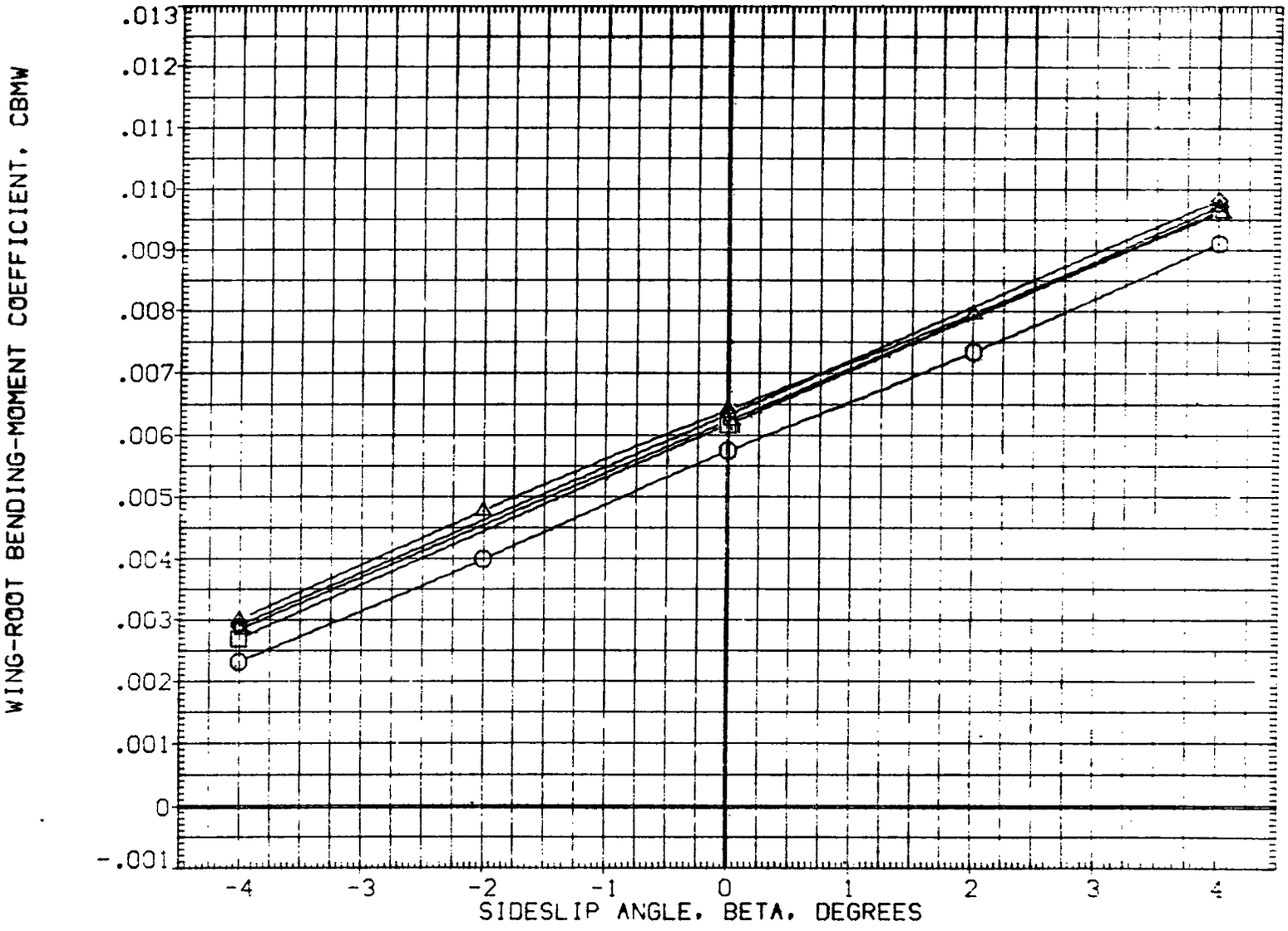


FIG.36 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PI
(RE6Y42)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700
(RE6Y53)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.200	30.700
(RE6Y71)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.200	30.700
(RE6Y65)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	2.200	30.700
(RE6Y59)		ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

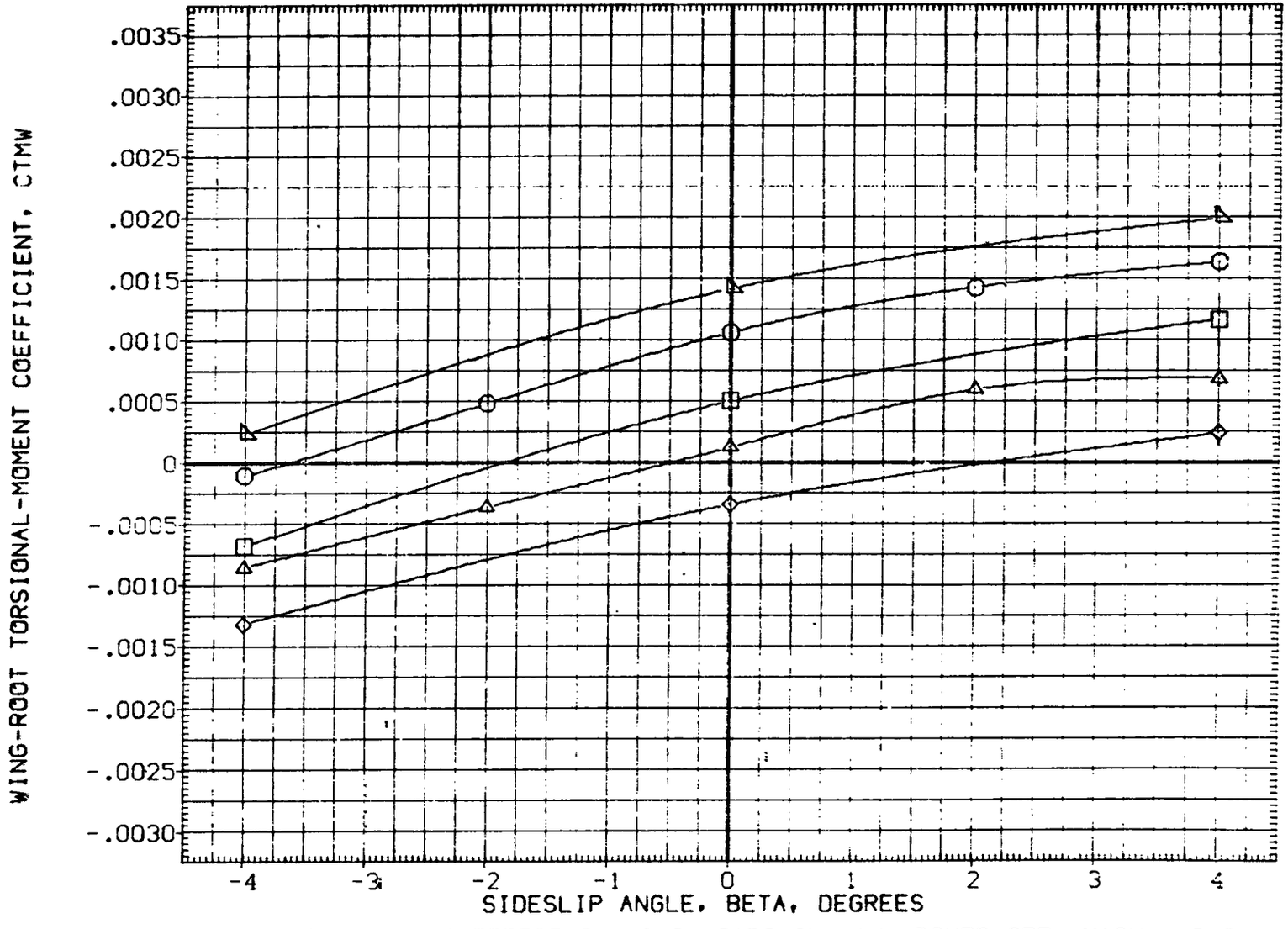


FIG.36 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(PE6Y42)	□	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(PE6Y63)	△	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	4.000	.000	2.200	30.700
(PE6Y71)	◇	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	10.000	-4.000	2.200	30.700
(PE6Y65)	○	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	8.000	-4.000	2.200	30.700
(PE6Y59)	▽	ARC97-044-IIA82B OTS(SRB=OFF MPS=OFF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	970.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

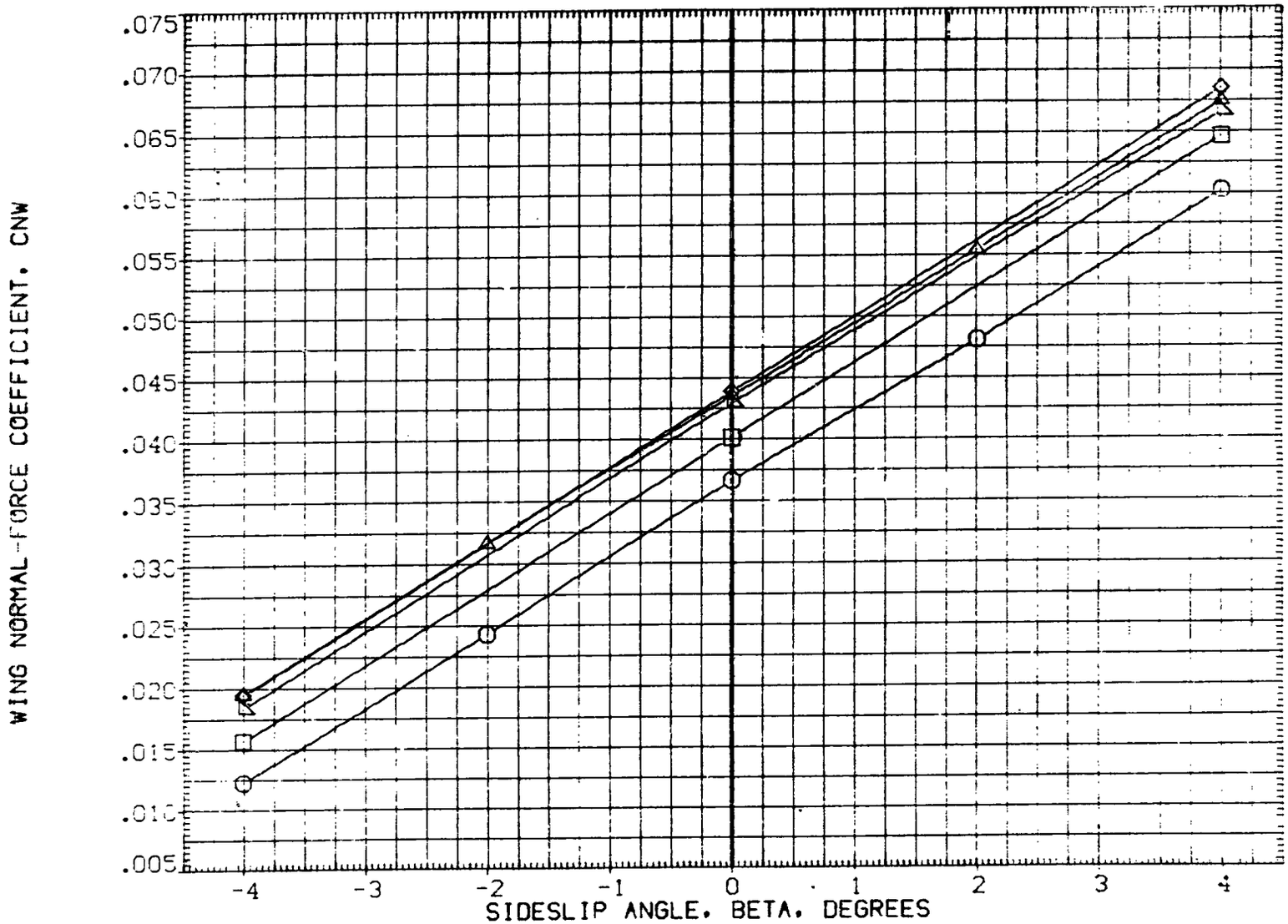


FIG.36 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.2

(ADALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y12)	AR[illegible]97-044-11A828 0TS(SRB=0FF	MPS=0FF)	.000	.000	2.200	30.700
(RE6Y53)	AR[illegible]97-044-11A828 0TS(SRB=0FF	MPS=0FF)	4.000	.000	2.200	30.700
(RE6Y71)	AR[illegible]97-044-11A828 0TS(SRB=0FF	MPS=0FF)	10.000	-4.000	2.200	30.700
(RE6Y65)	AR[illegible]97-044-11A828 0TS(SRB=0FF	MPS=0FF)	8.000	-4.000	2.200	30.700
(RE6Y59)	AR[illegible]97-044-11A828 0TS(SRB=0FF	MPS=0FF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

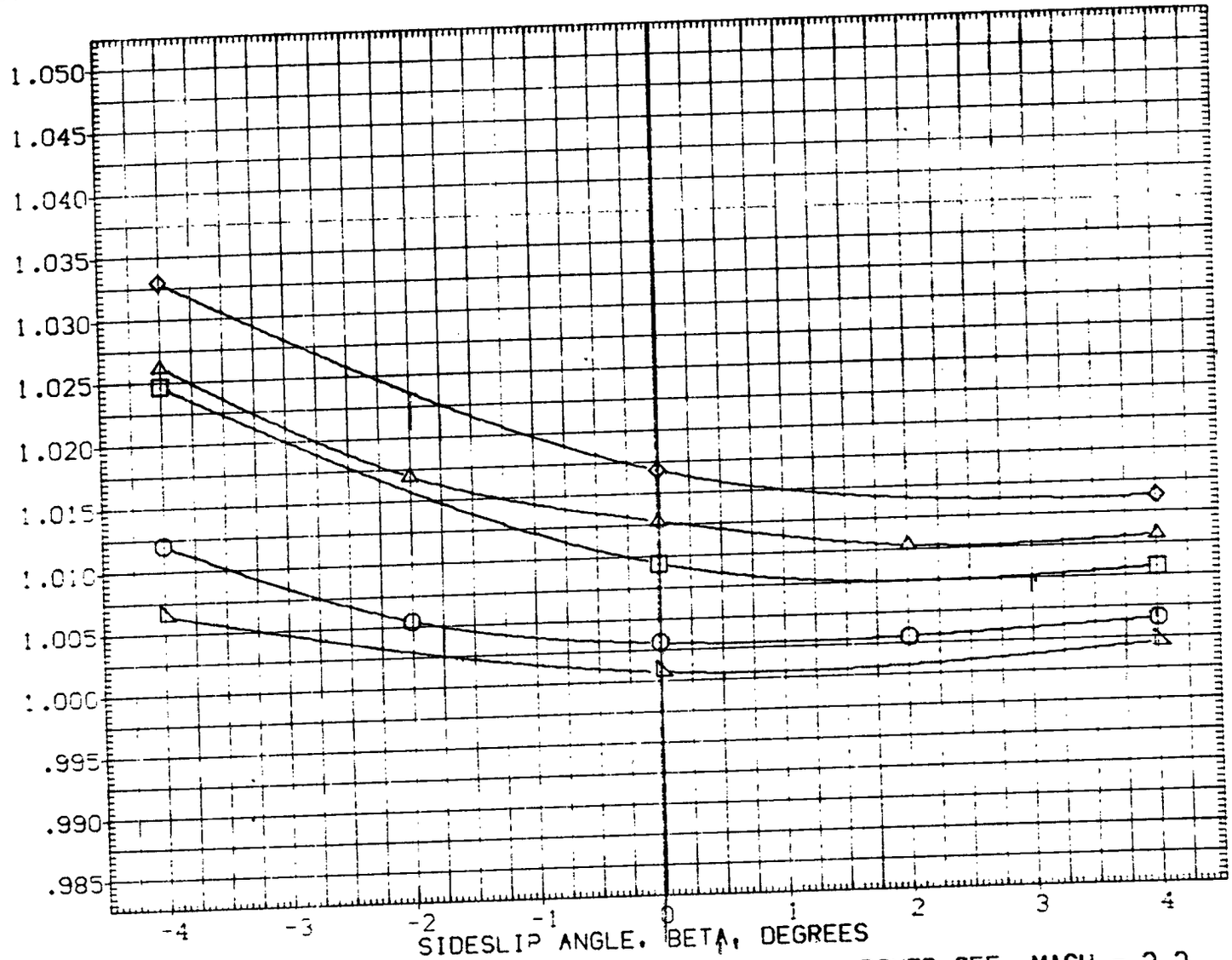


FIG.36 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y42)	□	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.200	30.700
(RE6Y53)	▽	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	.000	2.200	30.700
(RE6Y71)	△	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	10.000	-4.000	2.200	30.700
(RE6Y65)	◇	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	8.000	-4.000	2.200	30.700
(RE6Y59)	○	ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION

SREF	2880.0000	SQ.FT.
LREF	1[illegible].0000	IN.
BREF	[illegible].0000	IN.
XMRP	[illegible].0000	IN. AT
YMRP	[illegible].0000	IN. AT
ZMRP	[illegible].0000	IN. AT
SCALE	.0100	

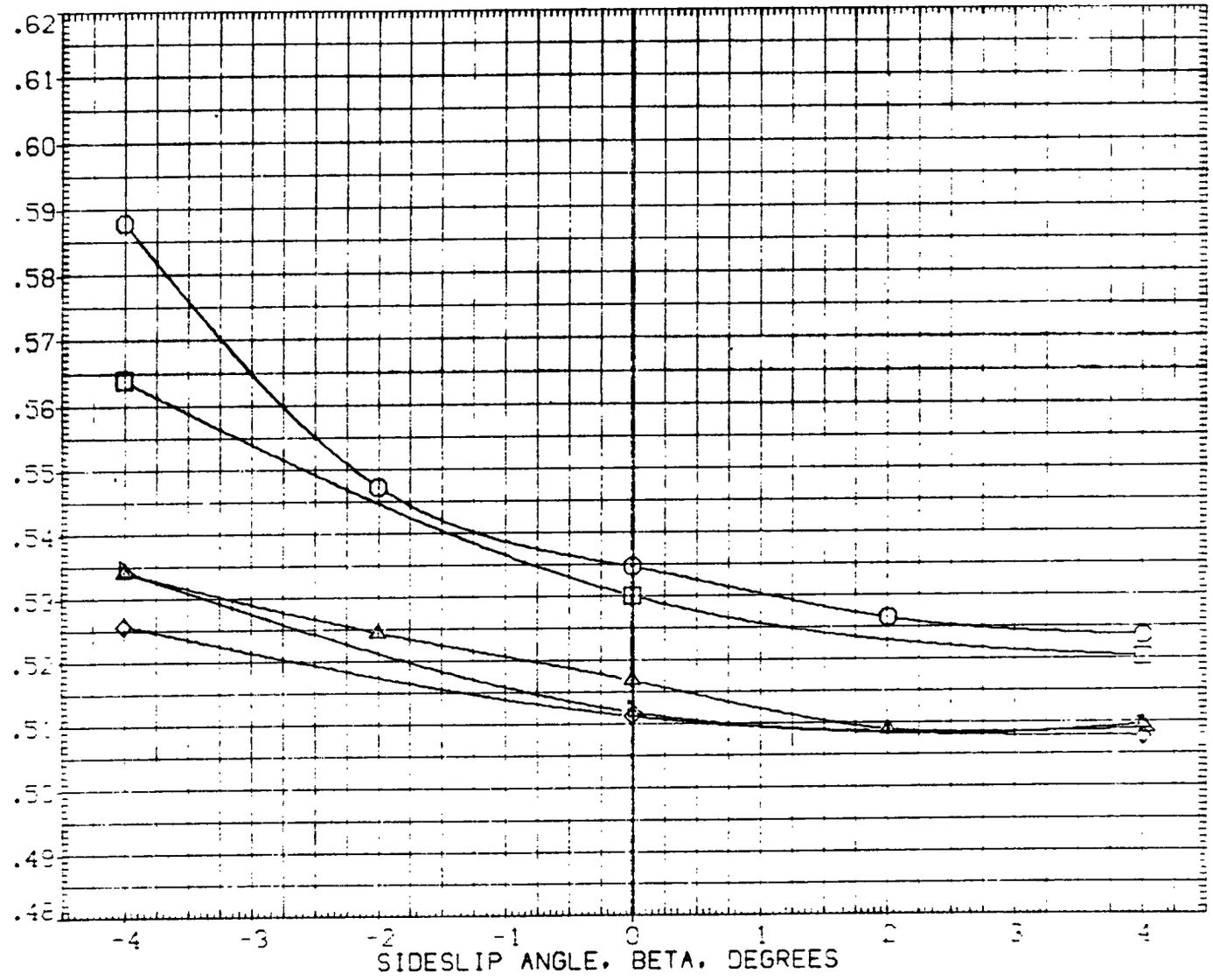


FIG.36 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER OFF, MACH = 2.2

(A)ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y28)	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(RE6Y49)	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700
(RE6Y67)	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700
(RE6Y61)	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700
(RE6Y55)	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

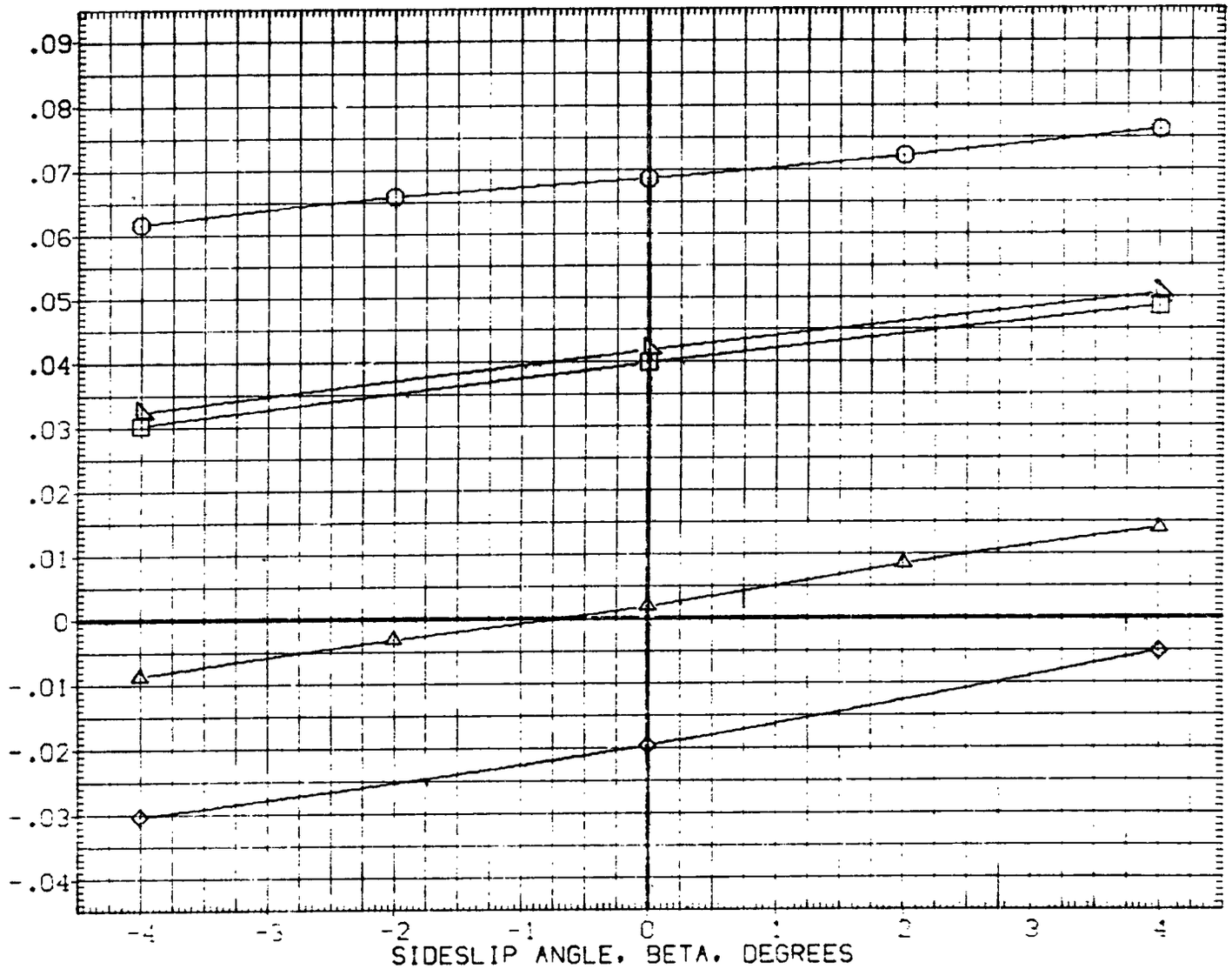


FIG.37 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER OFF, MACH = 1.55

(A)ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-1B	ELV-0B	MACH	PT
(REGY28)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	.000	.000	1.550	30.700
(REGY49)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	1.550	30.700
(REGY67)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	1.550	30.700
(REGY61)	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	1.550	30.700
(REGY55	ARC97-044-1IA82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	[illegible]	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN. X*
YMRP	[illegible]	IN. Y*
ZMRP	400.0000	IN. Z*
SCALE	.0100	

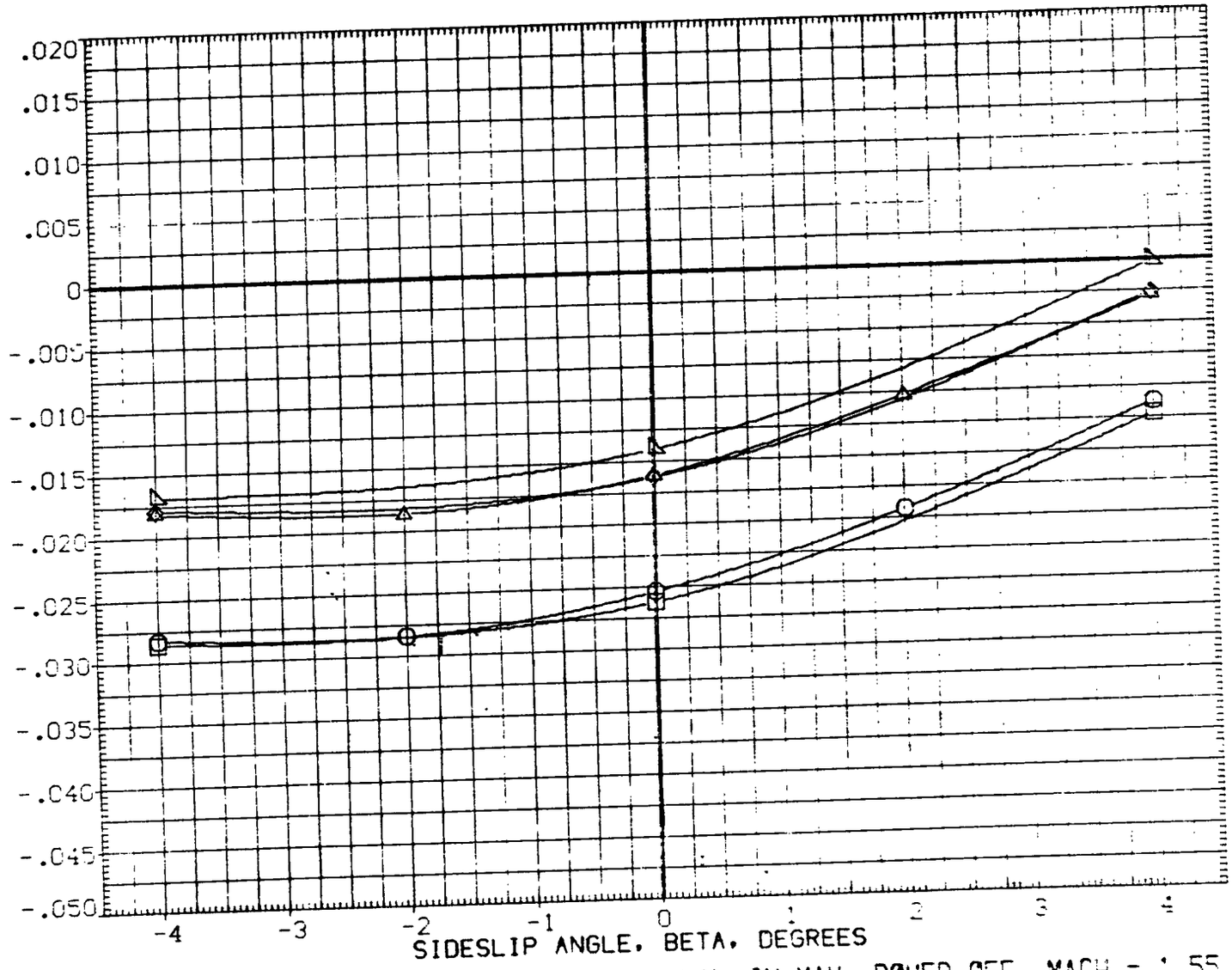


FIG.37 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER OFF, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y35		ARC97-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	2.000	30.700
(RE6Y51		AR[illegible]97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	.000	2.000	30.700
(RE6Y69		AR[illegible]97-044-11A82B OTS(SRB=OFF MPS=OFF)	10.000	-4.000	2.000	30.700
(RE6Y63		AR[illegible]97-044-11A82B OTS(SRB=OFF MPS=OFF)	8.000	-4.000	2.000	30.700
(RE6Y57		AR[illegible]97-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

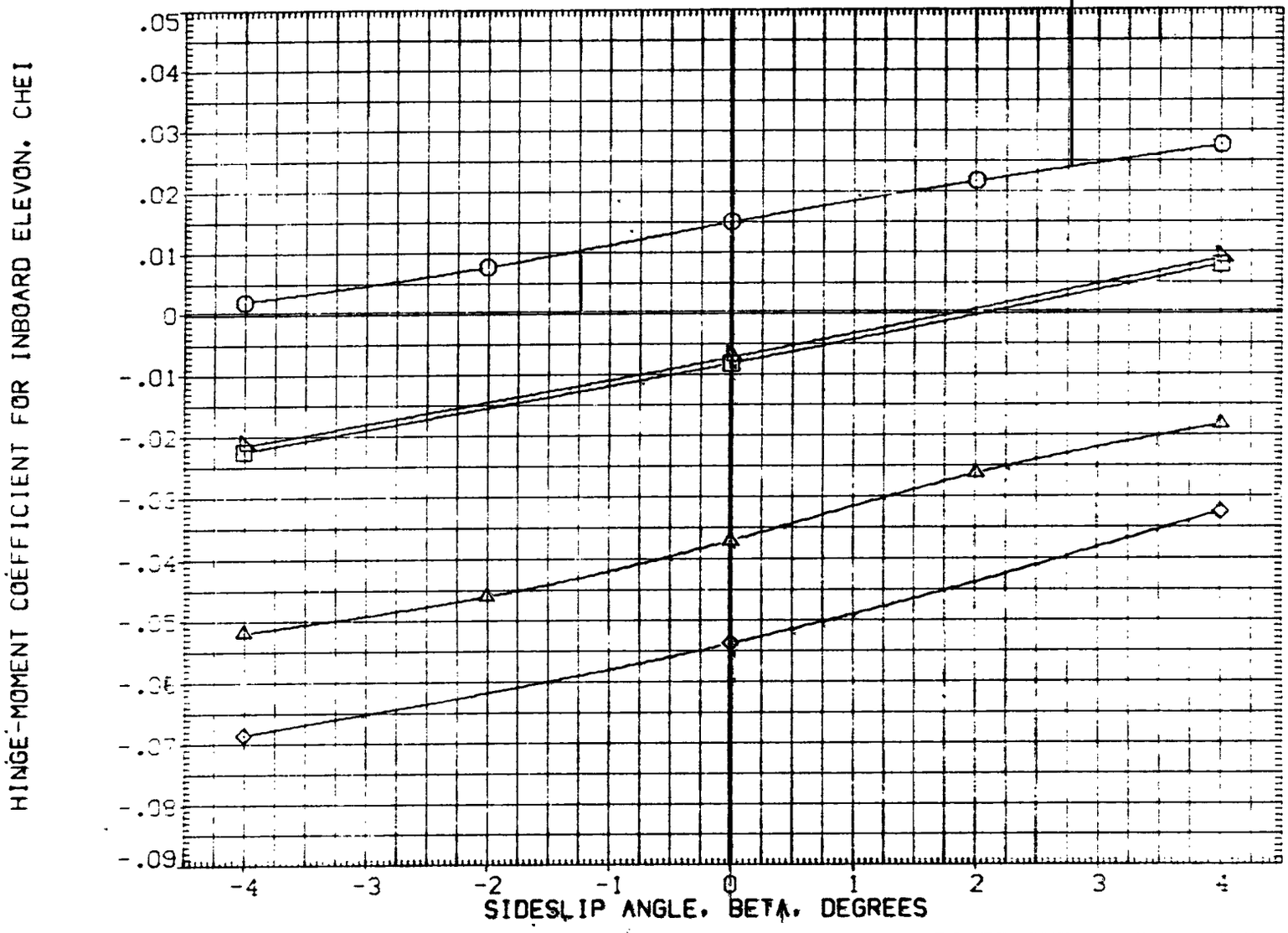


FIG.38 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER OFF, MACH = 2.0

(A)ALPHA = .00

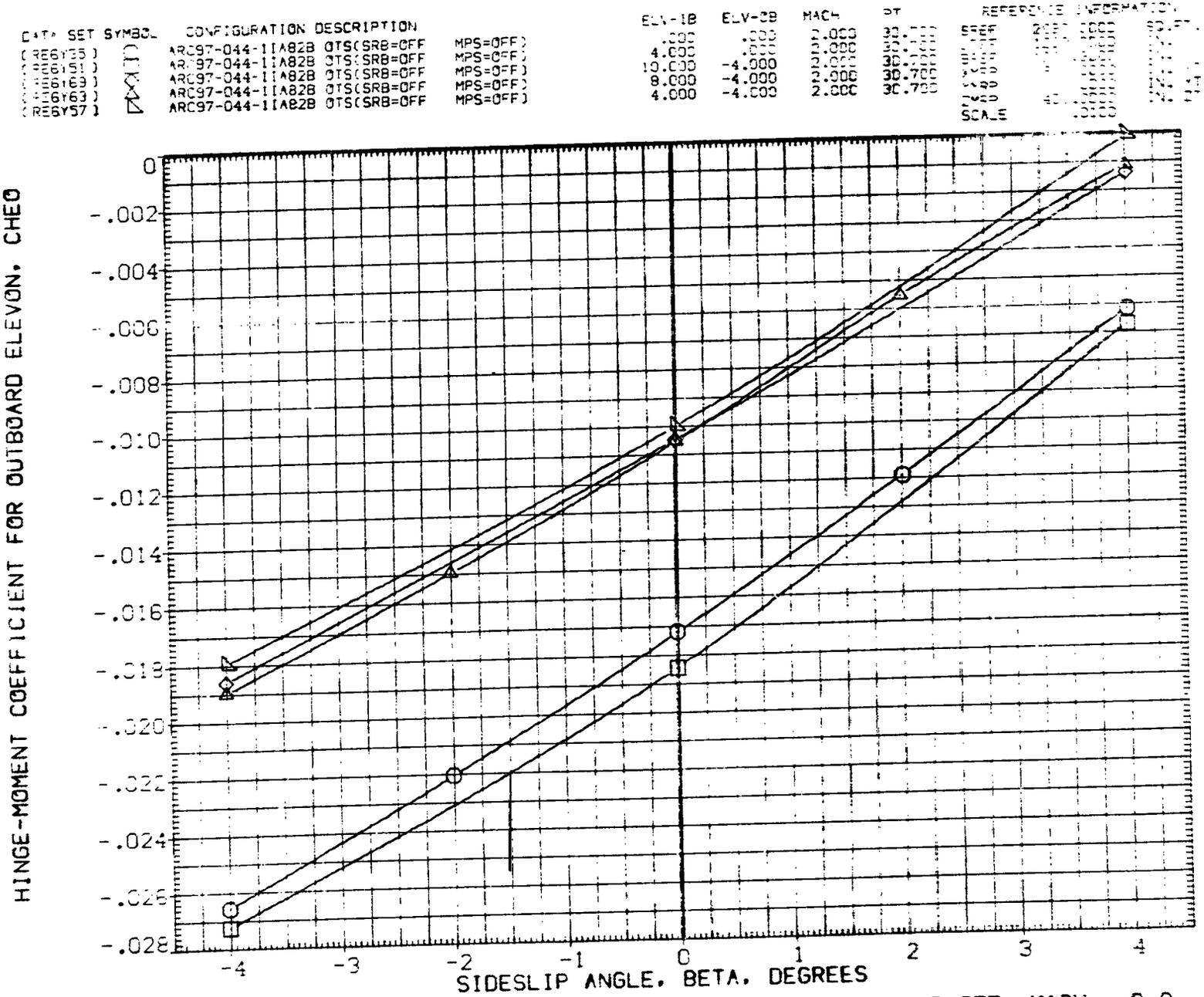


FIG.38 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER OFF, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		SQ.FT.
(RE6Y42)		AR97-044-11A82B	OTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	30.700	SREF	[illegible]	SQ.FT.
(RE6Y53)		AR97-044-11A82B	OTS(SRB=OFF	MPS=OFF)	4.000	.000	2.200	30.700	CREF	[illegible]	IN.
(RE6Y71)		AR97-044-11A82B	OTS(SRB=OFF	MPS=OFF)	.000	-4.000	2.200	30.700	BREF	[illegible]	IN.
(RE6Y65)		AR97-044-11A82B	OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	30.700	XMRP	976.0000	IN. XT
(RE6Y59)		AR97-044-11A82B	OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	30.700	YMRP	.0000	IN. YT
									ZMRP	410.0000	IN. ZT
									SCALE	.0100	

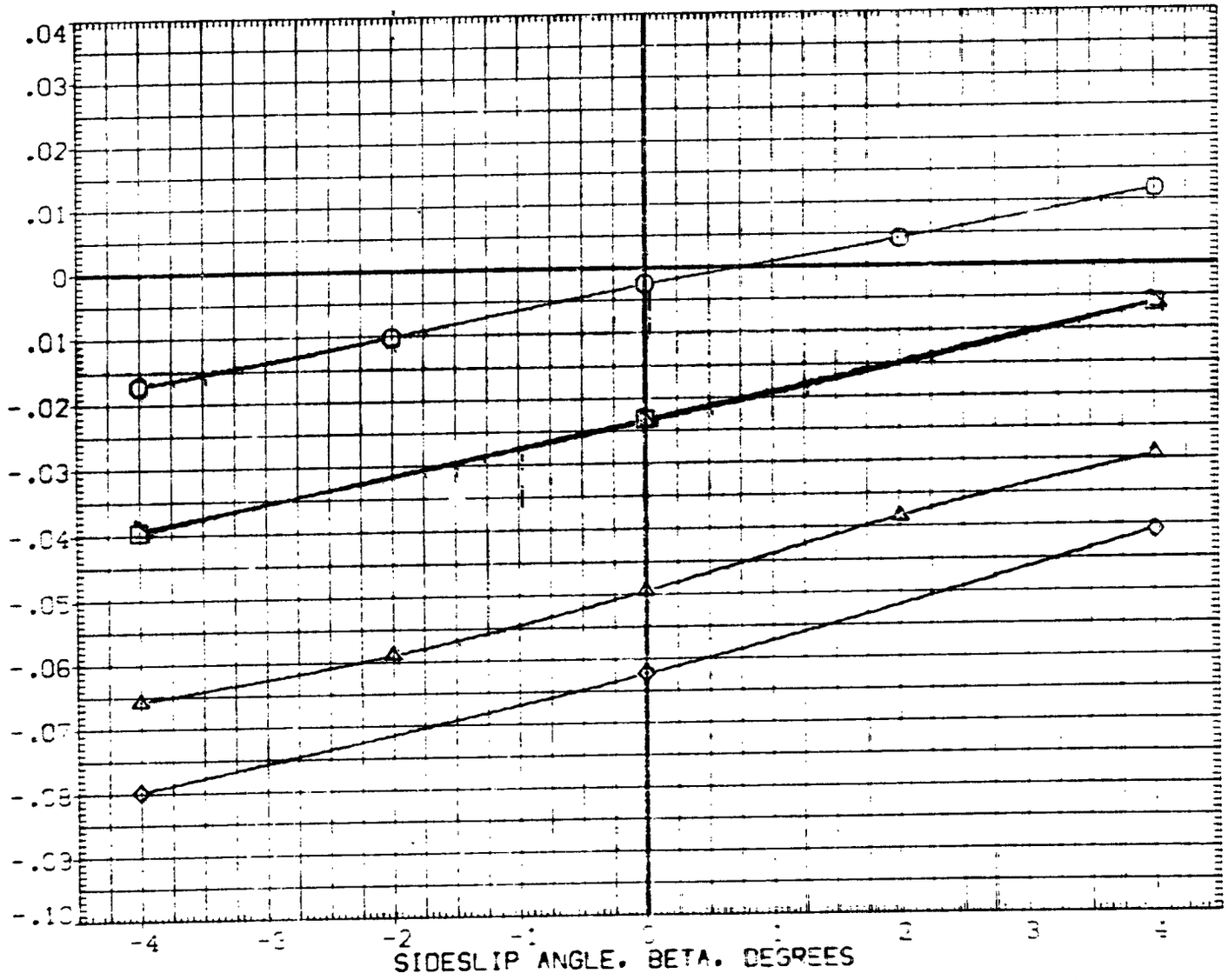


FIG.39 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER OFF, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	ALT	REFERENCE DIMENSION
(RE6Y42)		ARC97-044-11A82B GTS(SRB=OFF	MPS=OFF)	.000	.000	2.200	60,000	SREF 1885. LREF 180. BREF 47.
(RE6Y53)		ARC97-044-11A82B GTS(SRB=OFF	MPS=OFF)	4.000	.000	2.200	60,000	XMC .25 YMC 0. ZMC 0.
(RE6Y71)		ARC97-044-11A82B GTS(SRB=OFF	MPS=OFF)	10.000	-4.000	2.200	60,000	SREF 1885. LREF 180. BREF 47.
(RE6Y65)		ARC97-044-11A82B GTS(SRB=OFF	MPS=OFF)	6.000	-4.000	2.200	60,000	XMC .25 YMC 0. ZMC 0.
(RE6Y59)		ARC97-044-11A82B GTS(SRB=OFF	MPS=OFF)	4.000	-4.000	2.200	60,000	SREF 1885. LREF 180. BREF 47.
								XMC .25 YMC 0. ZMC 0.
								SCALE 1.000

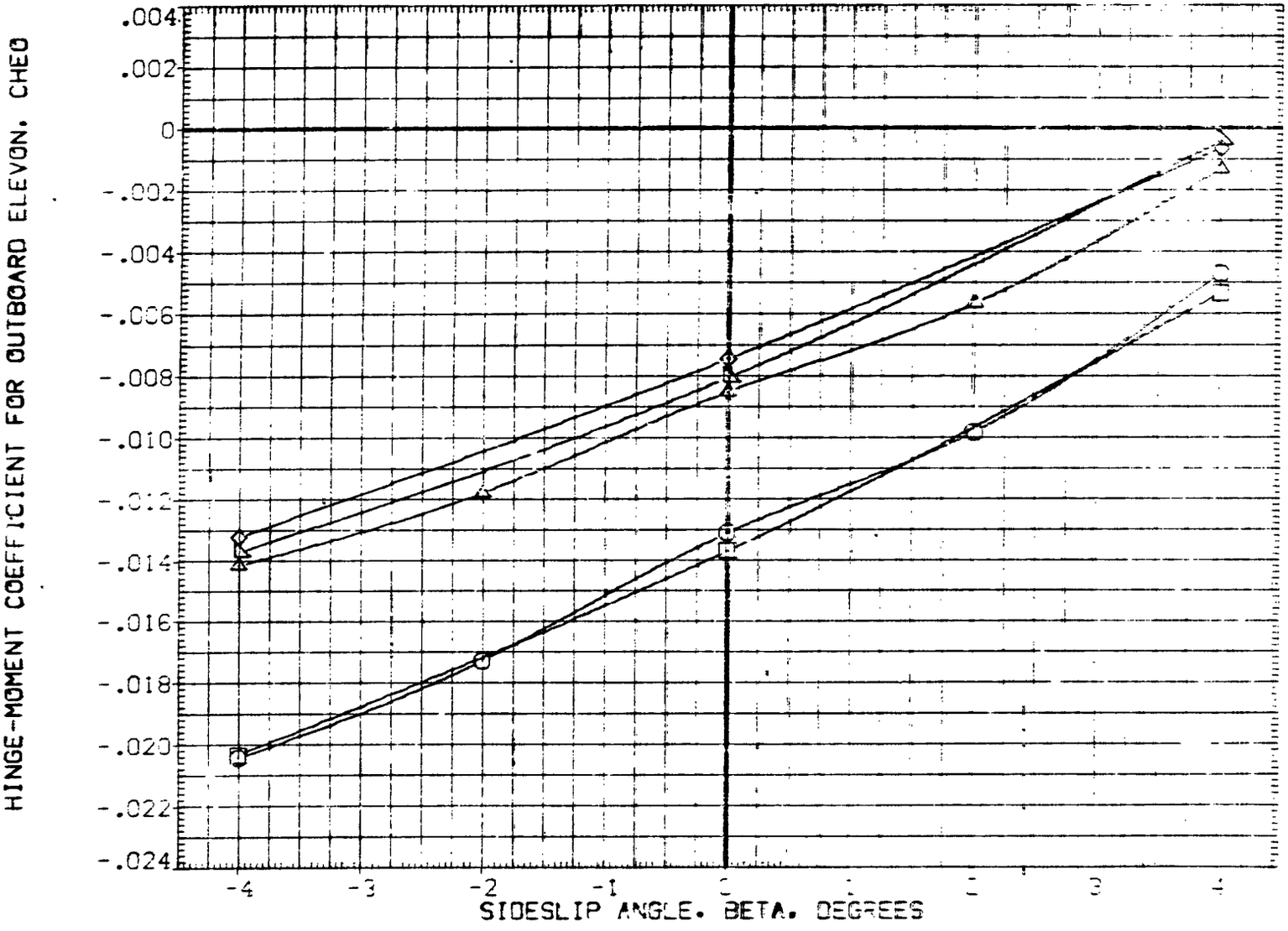


FIG.39 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN [illegible], POWER OFF, MACH = 2.2

(A)ALPHA = .00

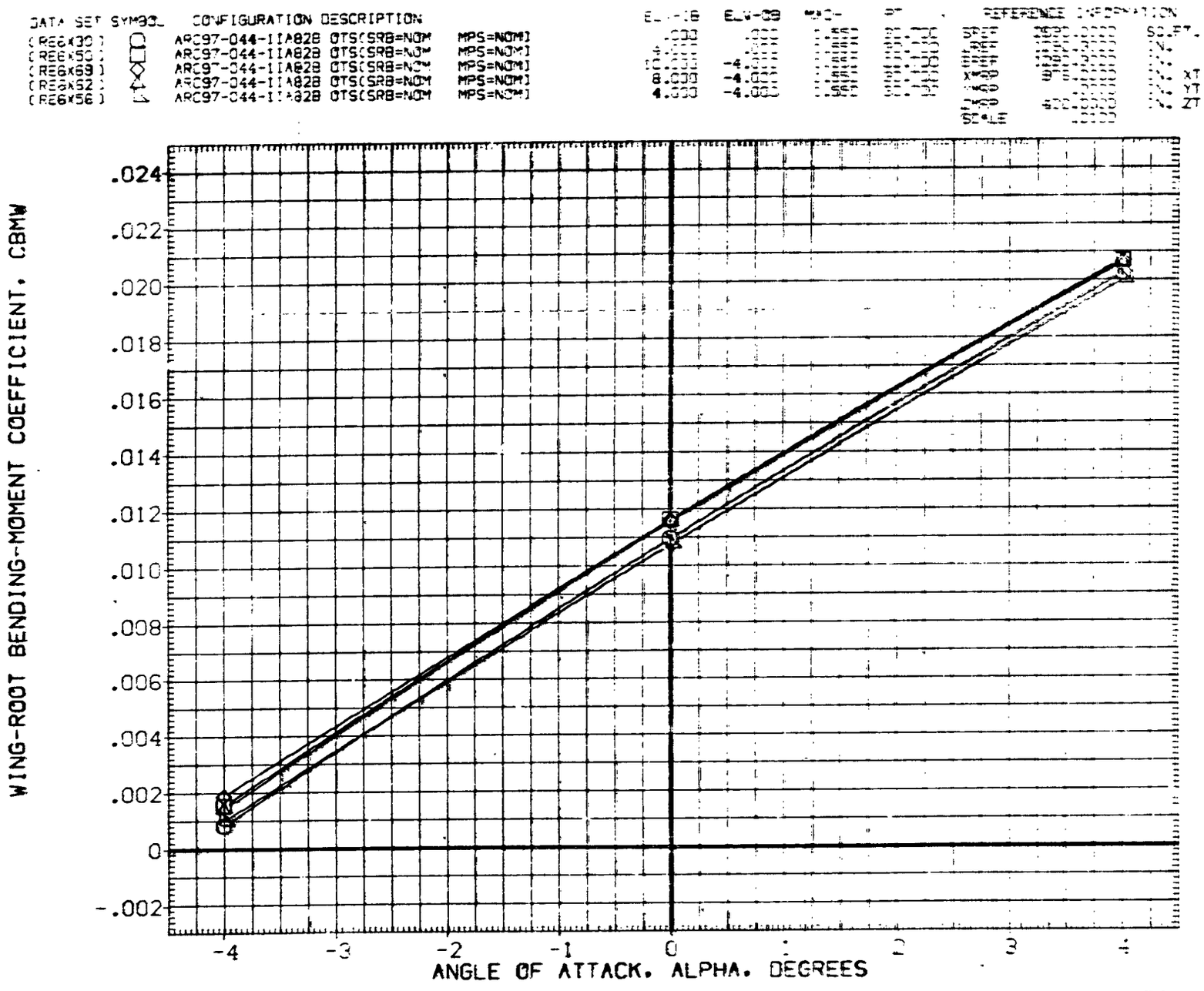


FIG.40 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6*30)	□	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700
(RE6*50)	△	ARC97-044-11A82B OTS(SRB NOM	MPS=NOM)	4.000	.000	1.550	30.700
(RE6*68)	◇	*RC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6*62)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6*56)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	[illegible]	SQ.FT.
BREF	[illegible]	IN.
CREF	[illegible]	IN.
XMRP	[illegible]	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCAL	.0100	

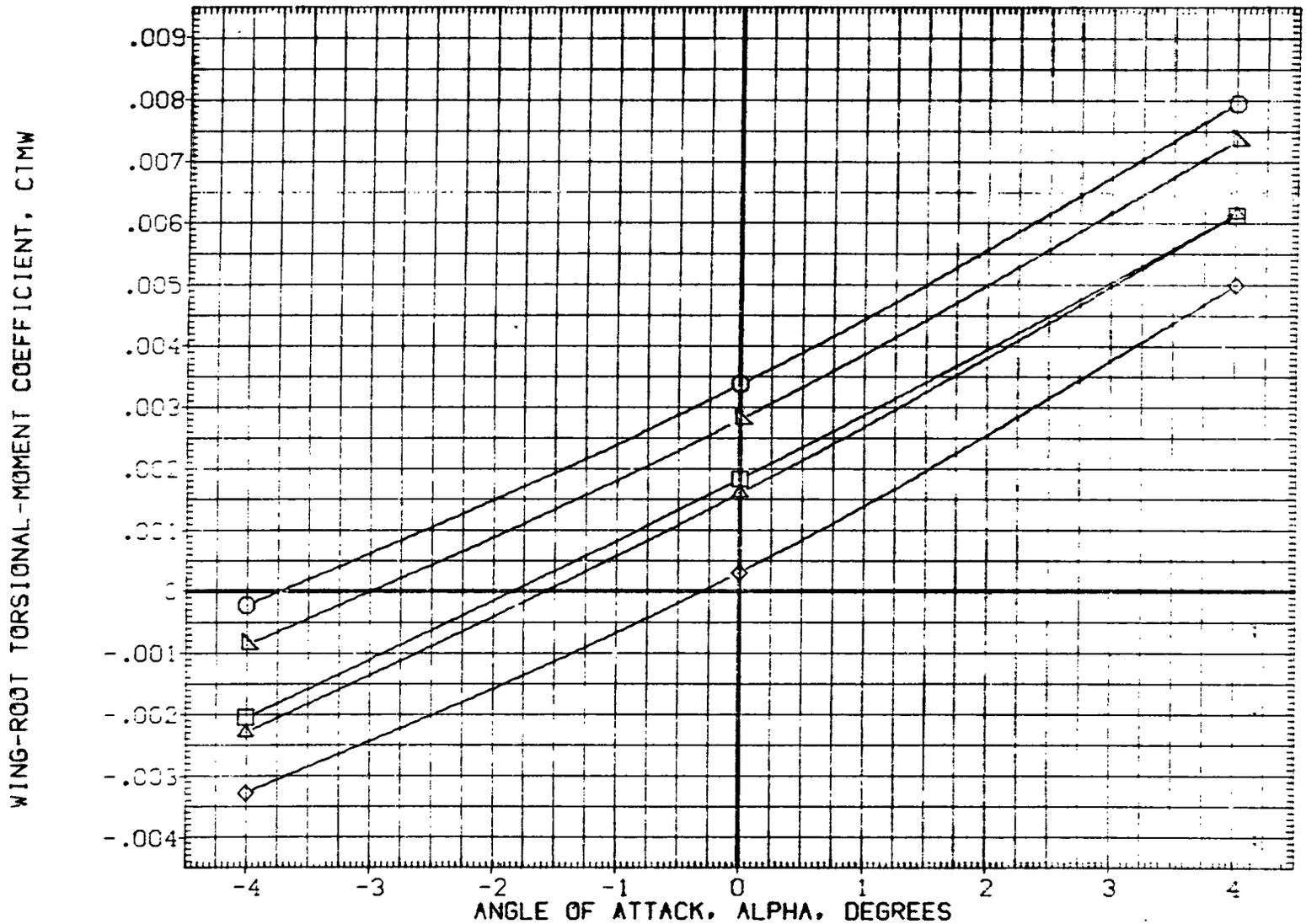


FIG.40 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 1.55

CA)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X30)	□	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6X50)	◇	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	.000	1.550	30.700
(RE6X68)	⋈	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6X62)	△	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6X56)	▽	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

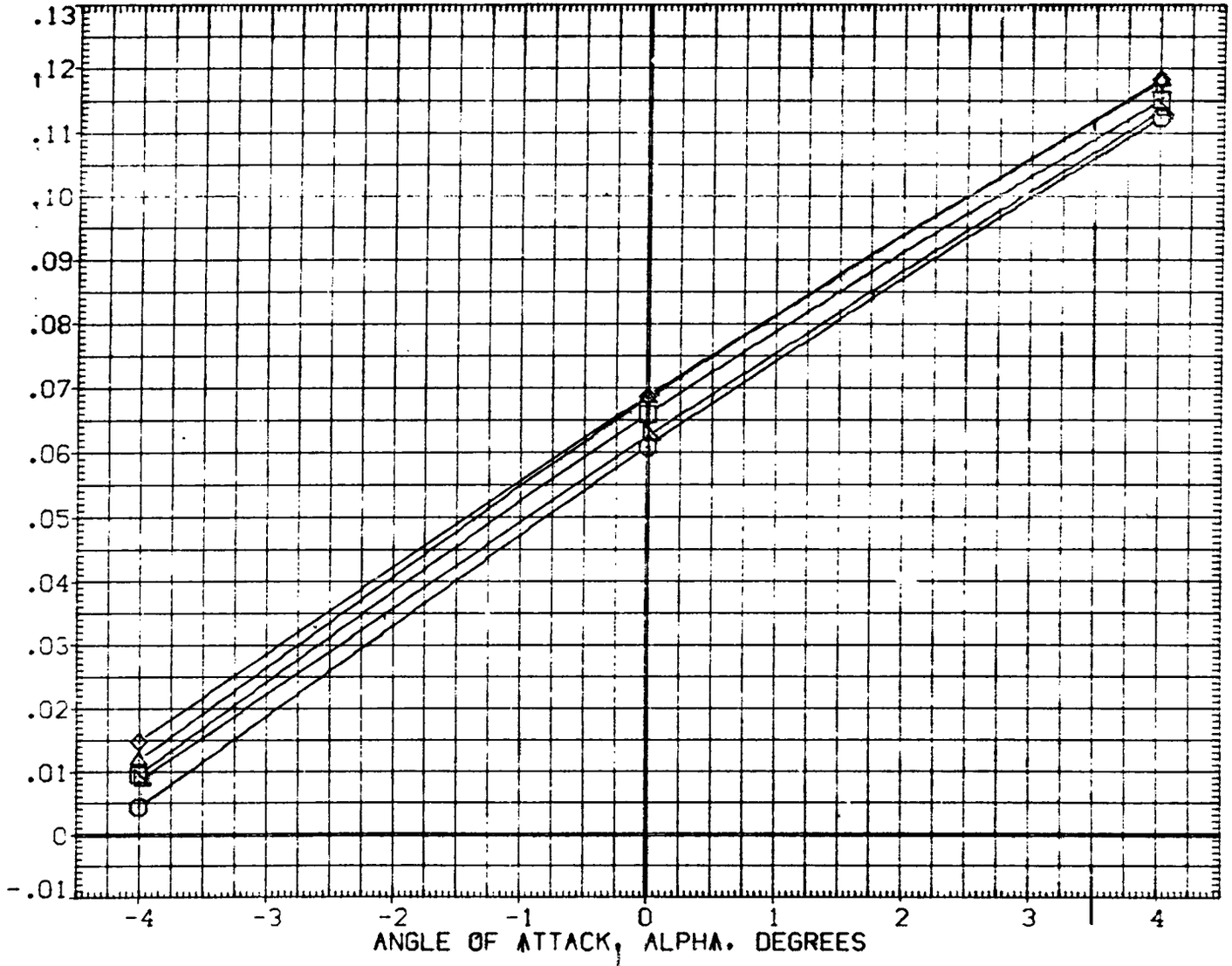


FIG.40 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6x30)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700
(RE6x50)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	1.550	30.700
(RE6x68)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6x62)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6x56)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF [illegible] SQ.FT.
CREF [illegible] IN.
BREF [illegible] IN.
XMRP [illegible] IN. XT
YMRP [illegible] IN. YT
ZMRP [illegible] IN. ZT
SCALE .0100

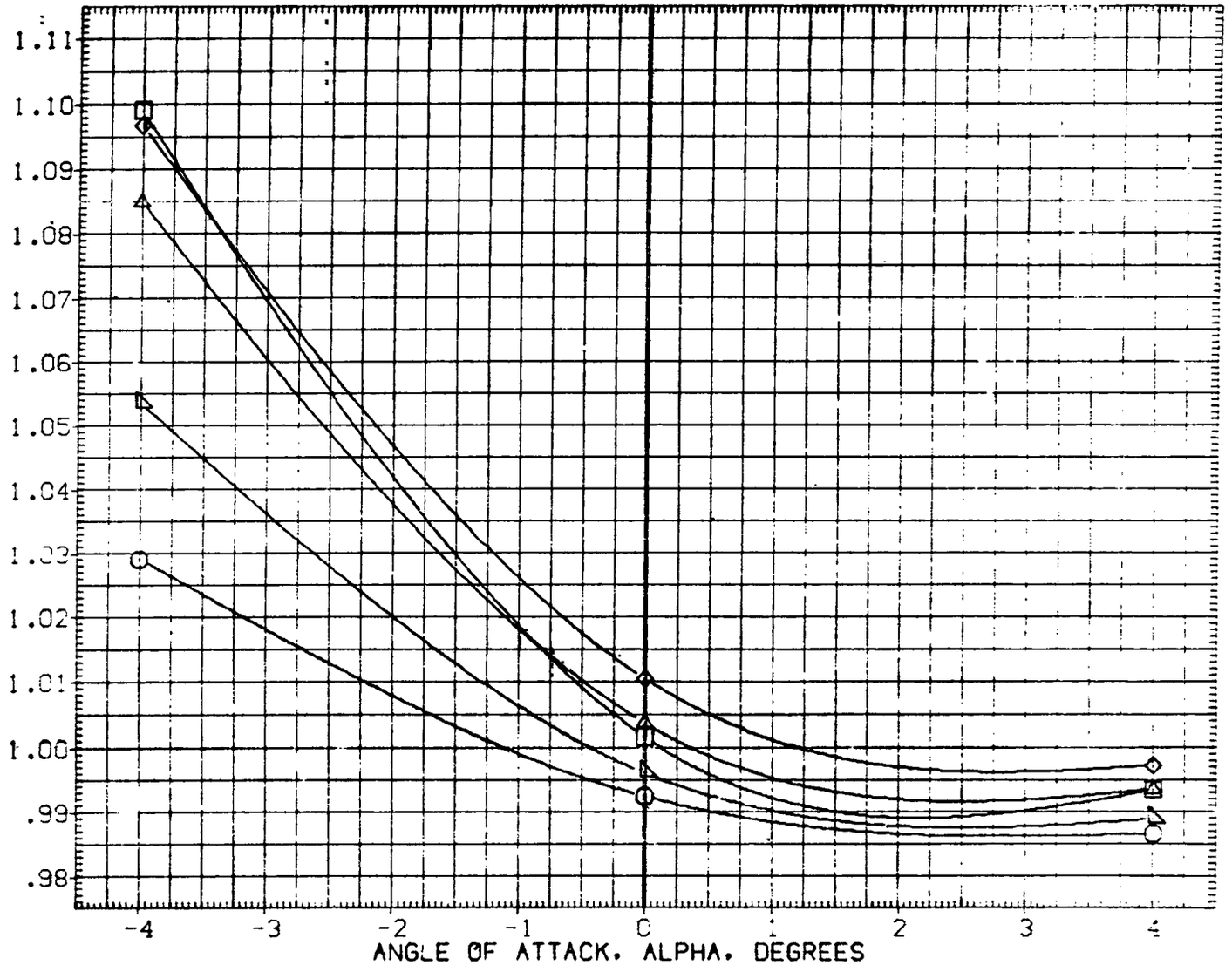


FIG.40 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X30)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6X50)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	.000	1.550	30.700
(RE6X68)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6X62)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6X56)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

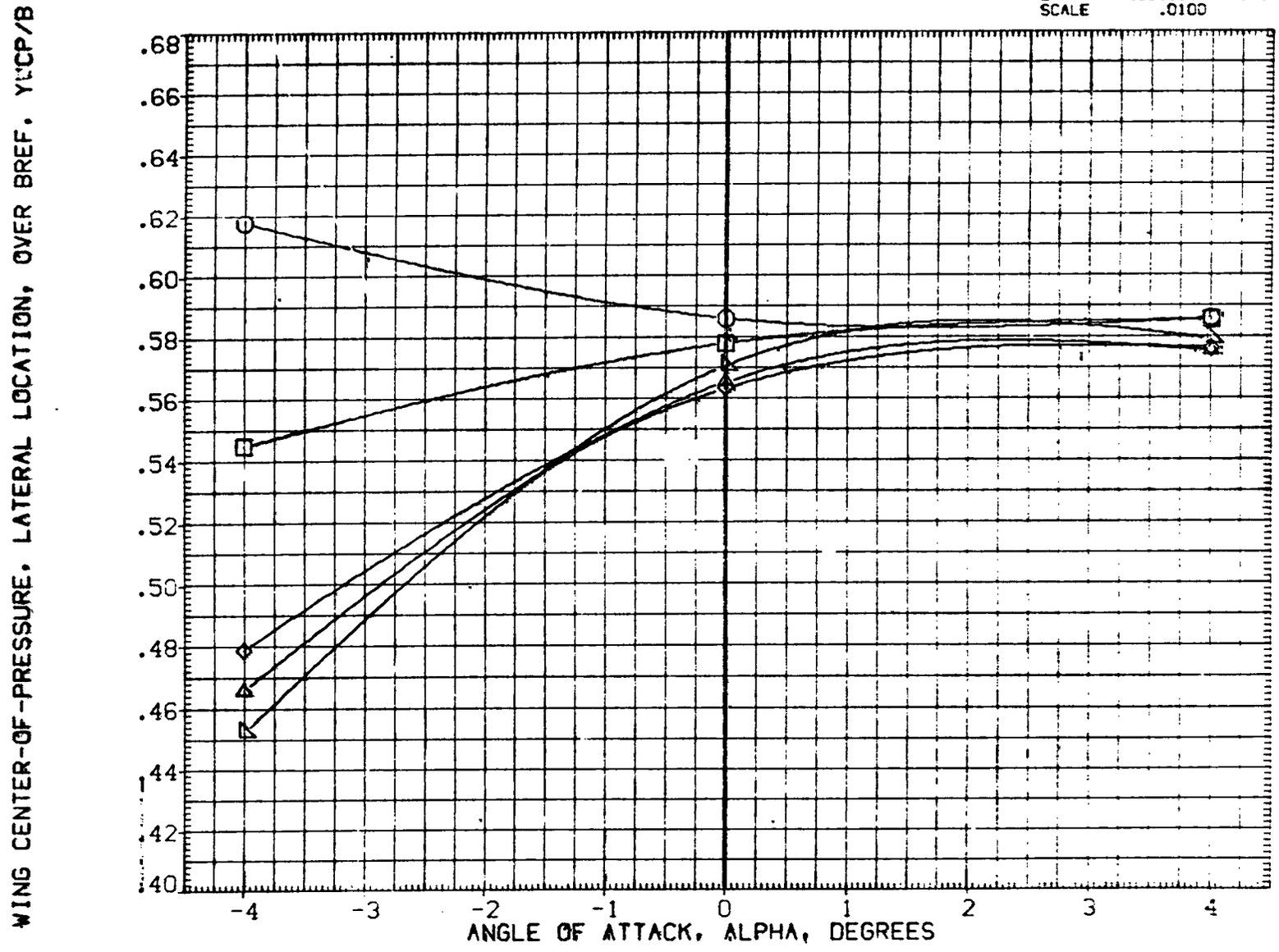


FIG.40 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
RE6X37		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
RE5X52		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	.000	2.000	30.700
RE5X70		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	2.000	30.700
RE6X64		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	2.000	30.700
RE5X58		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION

SREF	1690.0000	SQ.FT.
LREF	1[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN. XT
YMRP	[illegible]	IN. YT
ZMRP	[illegible]	IN. ZT
SCALE	.0100	

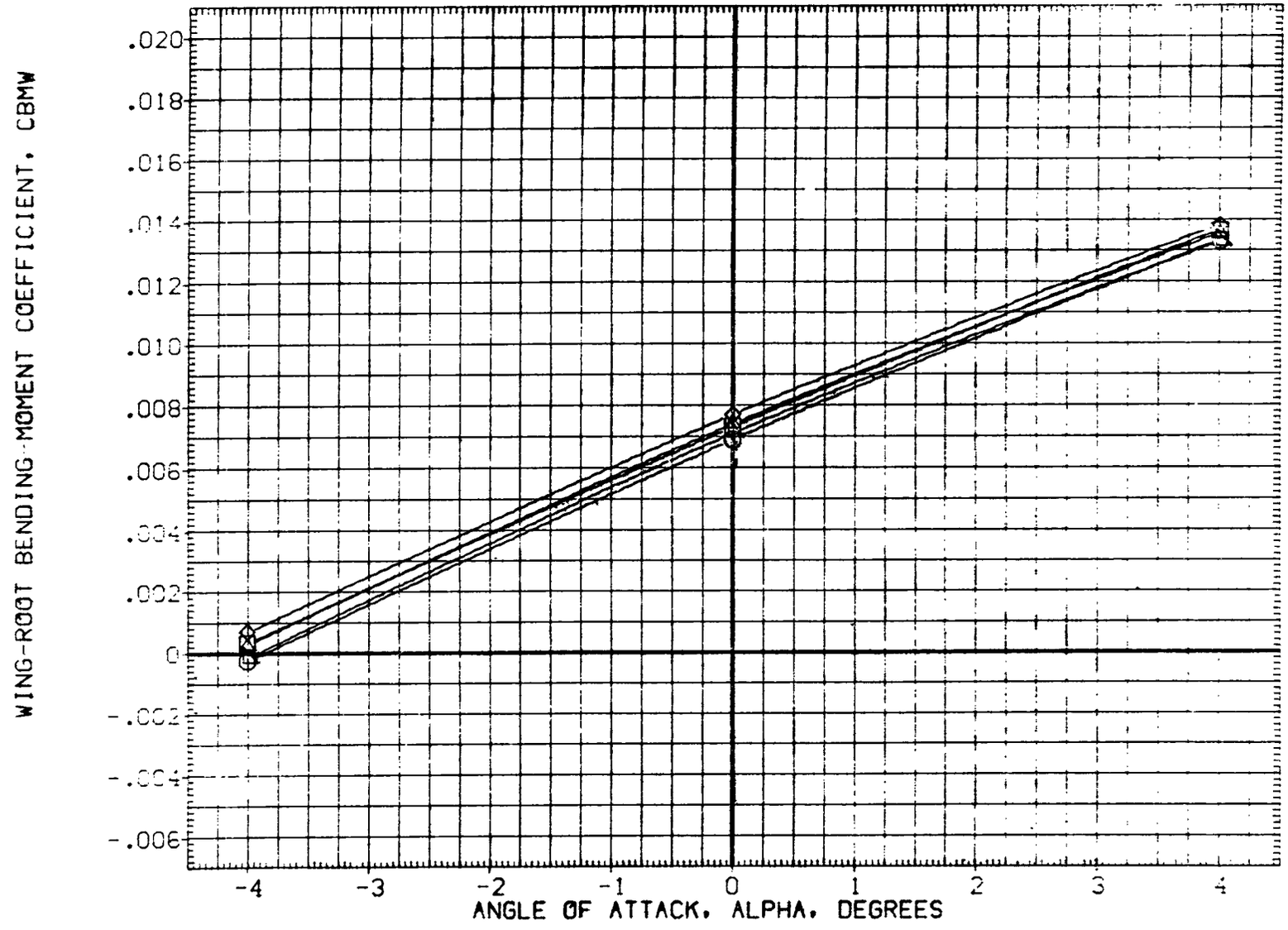


FIG.41 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X37)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(RE6X52)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.000	30.700
(RE6X70)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.000	30.700
(RE6X64)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.000	30.700
(RE6X58)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

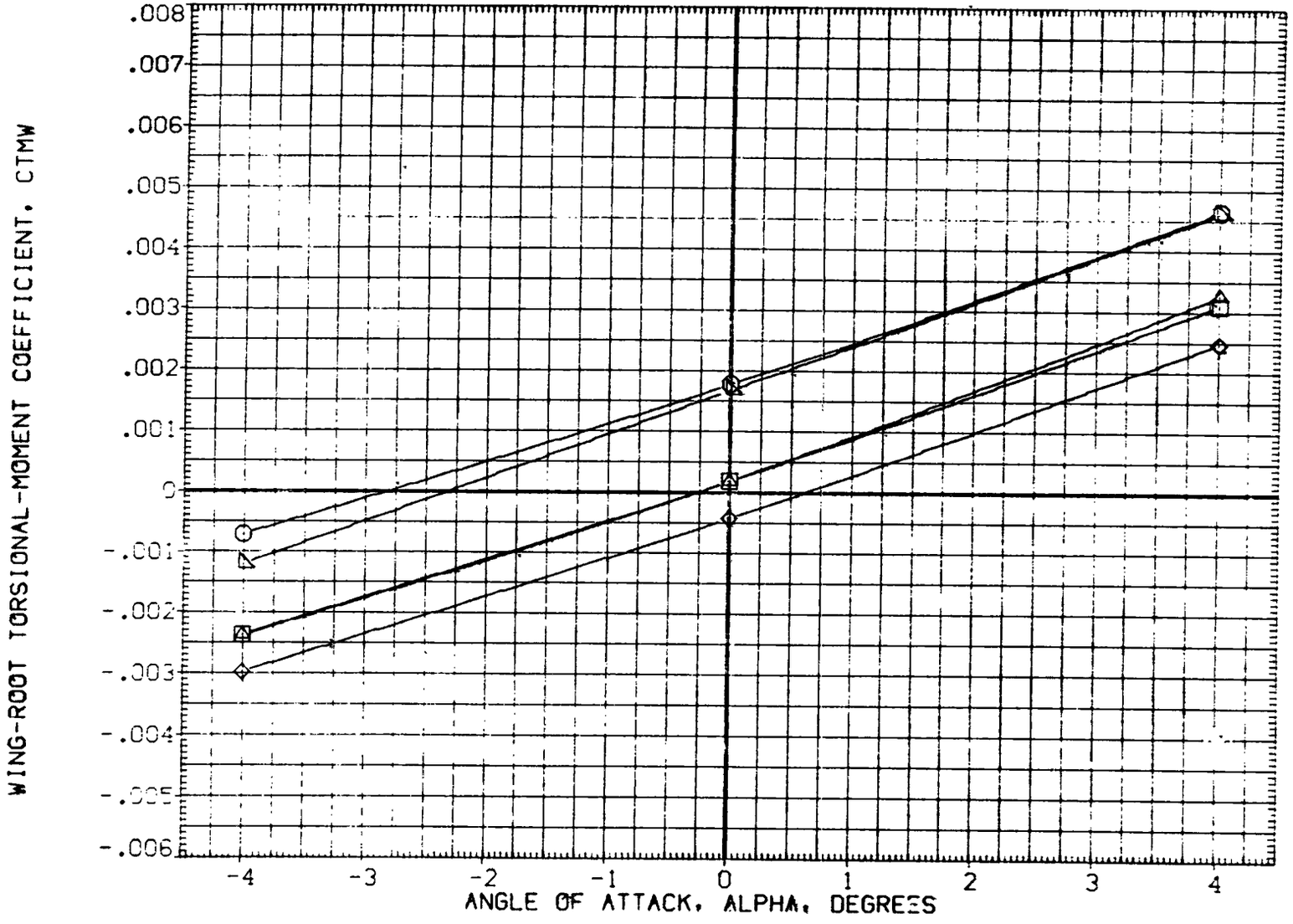


FIG.41 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
RE6X37	◇	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
RE6X92	□	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.000	30.700
RE6X70	○	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.000	30.700
RE6X84	△	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.000	30.700
RE6X68	▽	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION

SREF	[illegible]	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN. XT
YMRP	[illegible]	IN. YT
ZMRP	[illegible]	IN. ZT
SCALE	.0100	

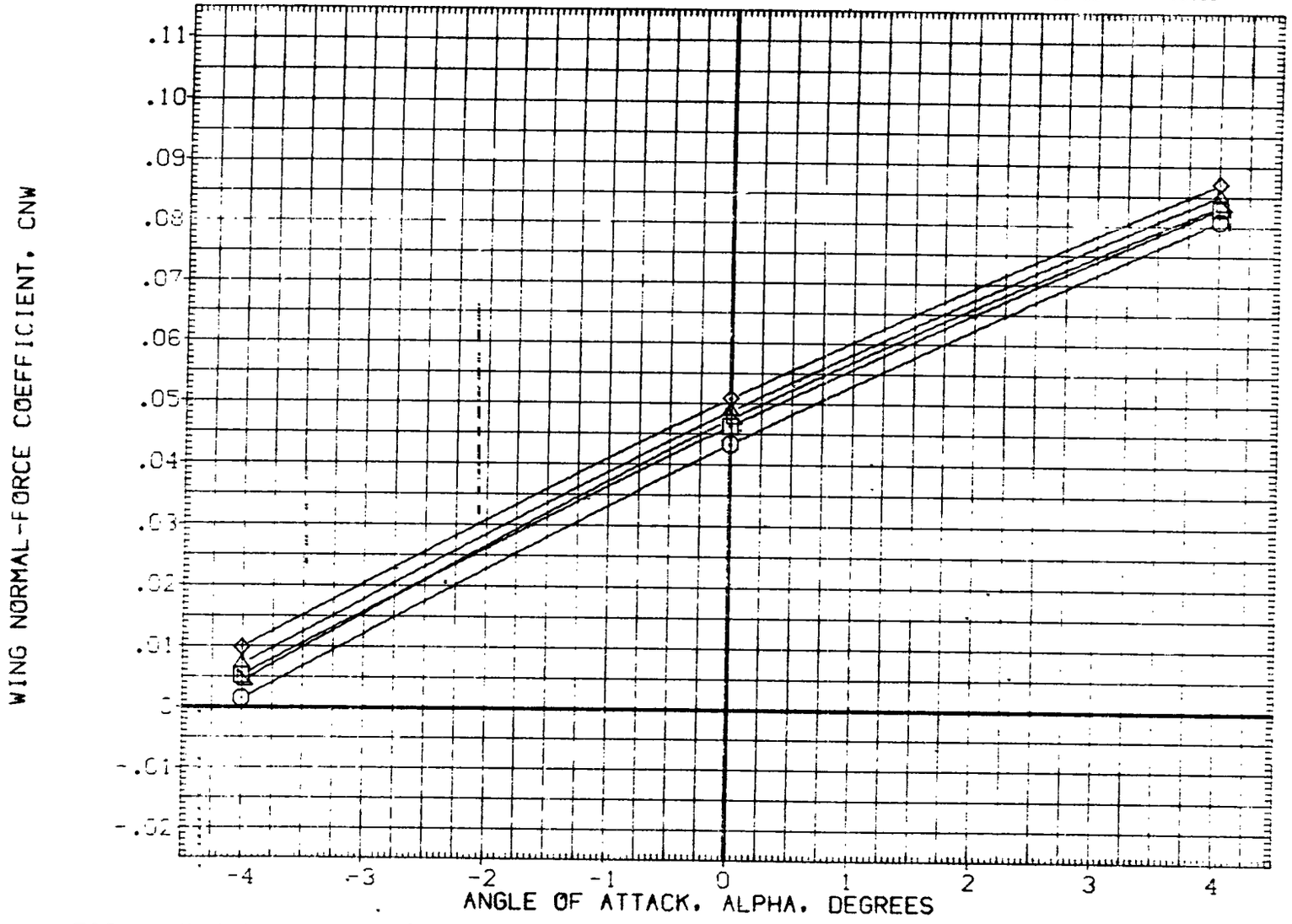


FIG.41 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X37)	□	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(RE6X52)	◇	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.000	30.700
(RE6X70)	△	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.000	30.700
(RE6X64)	○	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.000	30.700
(RE6X58)	⊠	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

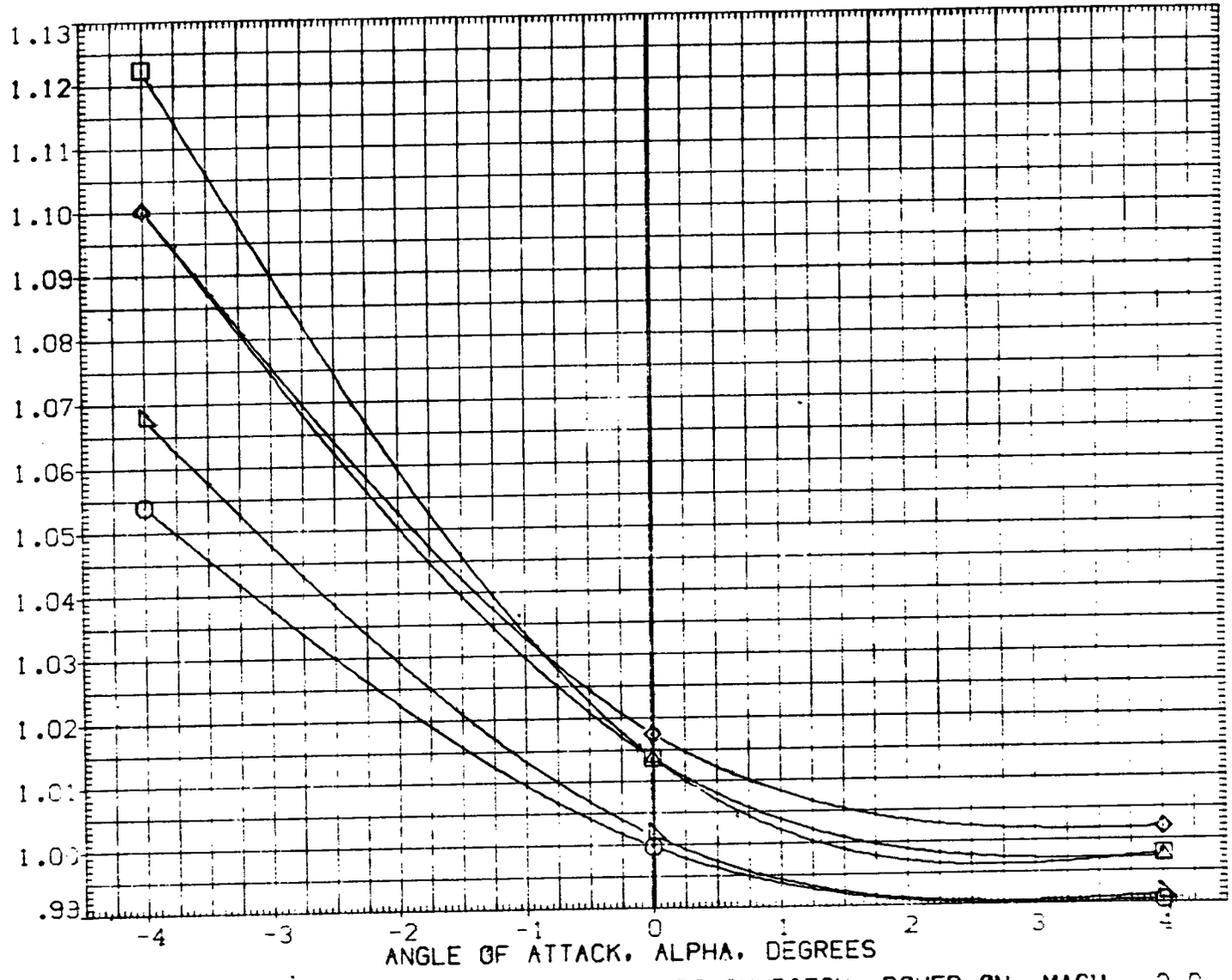


FIG.41 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X37)	□	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(RE6X52)	◇	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.000	30.700
(RE6X70)	△	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.000	30.700
(RE6X64)	○	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.000	30.700
(RE6X58)	◁	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1055.1000	IN.
BREF	1055.1000	IN.
XMRP	875.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	410.0000	IN. ZT
SCALE	.0100	

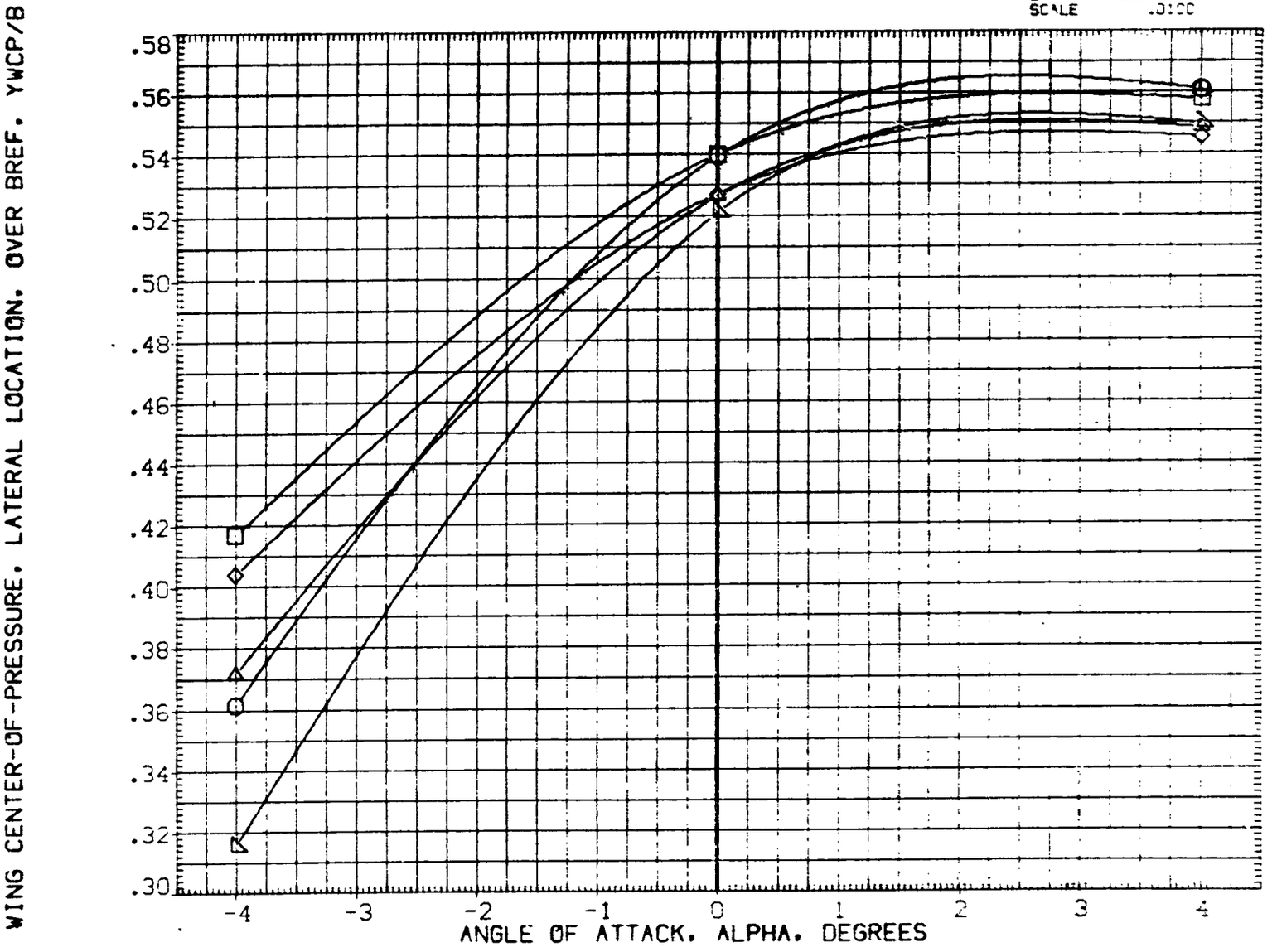


FIG.41 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X44)	□	AR297-044-11A828 OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700
(RE6X54)	○	AR297-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.200	30.700
(RE6X72)	△	AR297-044-11A828 OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.200	30.700
(RE6X66)	◇	AR297-044-11A828 OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.200	30.700
(RE6X60)	▷	AR297-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.8000	IN.
BREF	1290.8000	IN.
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

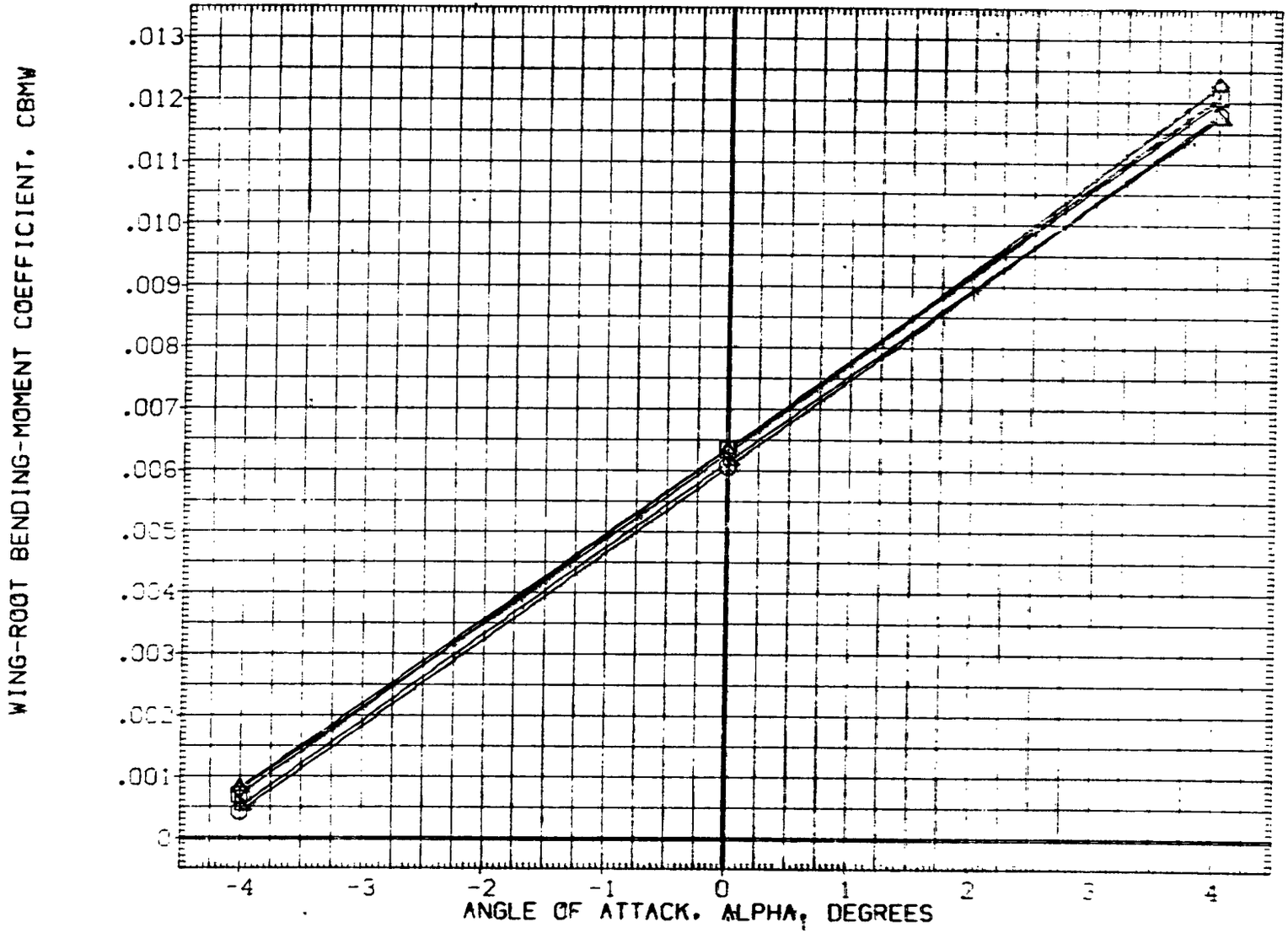


FIG.42 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
(RE6X44)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700	SREF 0880.0000 SQ.FT.
(RE6X54)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.200	30.700	LREF 0.0000 FT.
(RE6X72)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.200	30.700	BREF 0.0000 FT.
(RE6X66)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.200	30.700	XMRP 0.0000 FT.
(RE6X60)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.200	30.700	YMRP 0.0000 FT.
								ZMRP 400.0000 FT.
								SCALE 1.0000

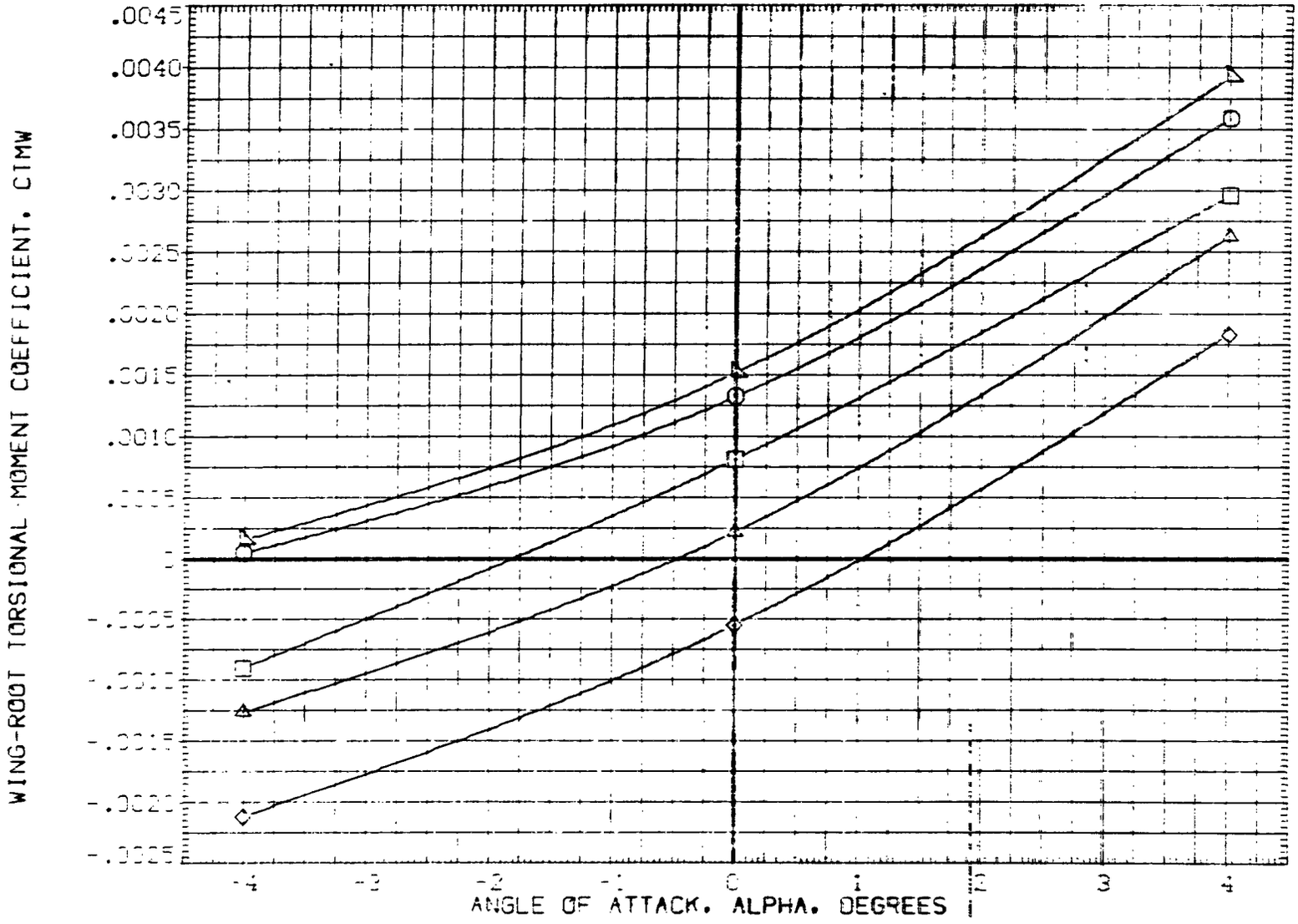


FIG.42 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6x44)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700
(RE6x54)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.200	30.700
(RE6x71)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.200	30.700
(RE6x66)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.200	30.700
(RE6x65)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1090.0000	IN.
BREF	1090.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

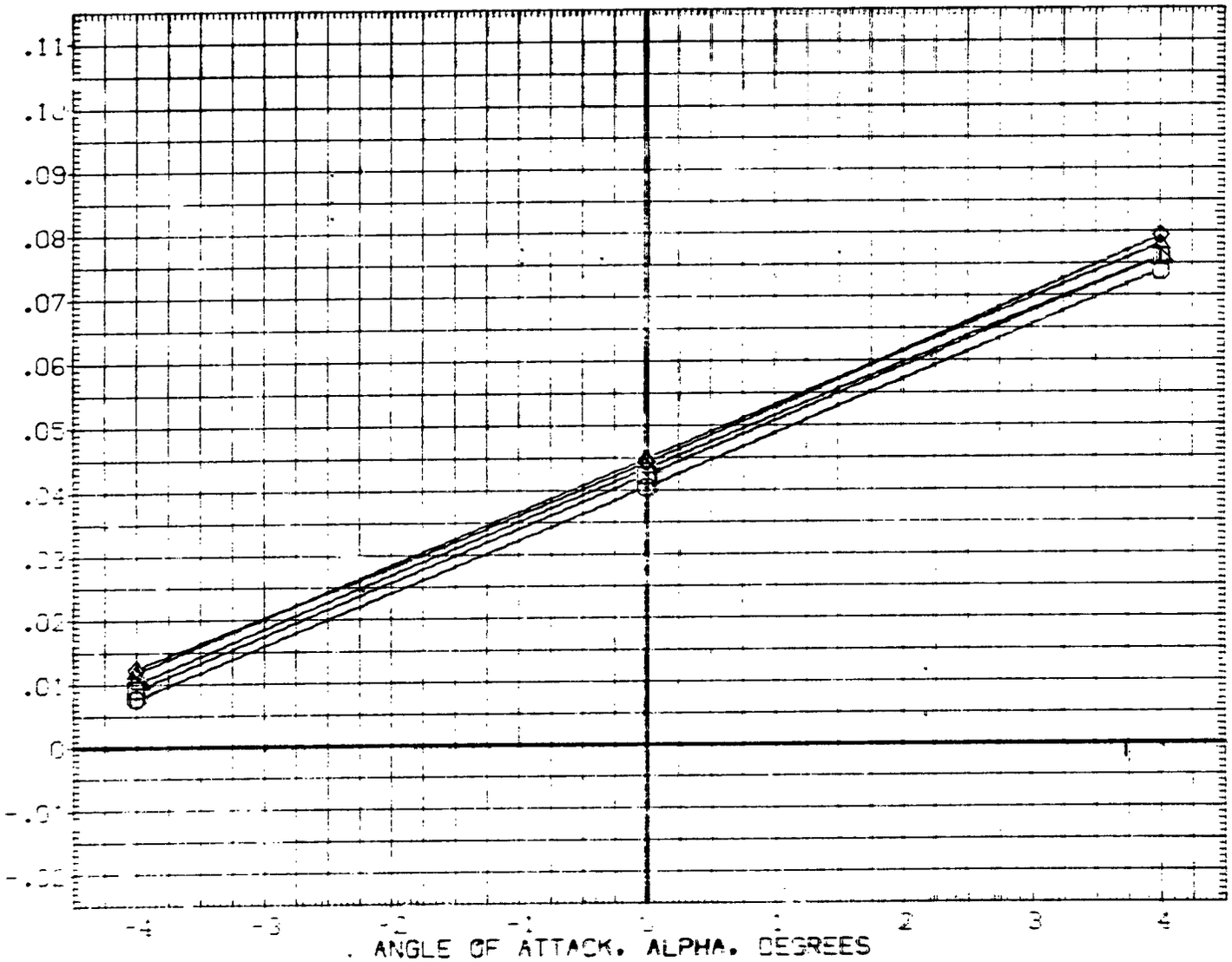


FIG.42 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.2

CASBETA = .00

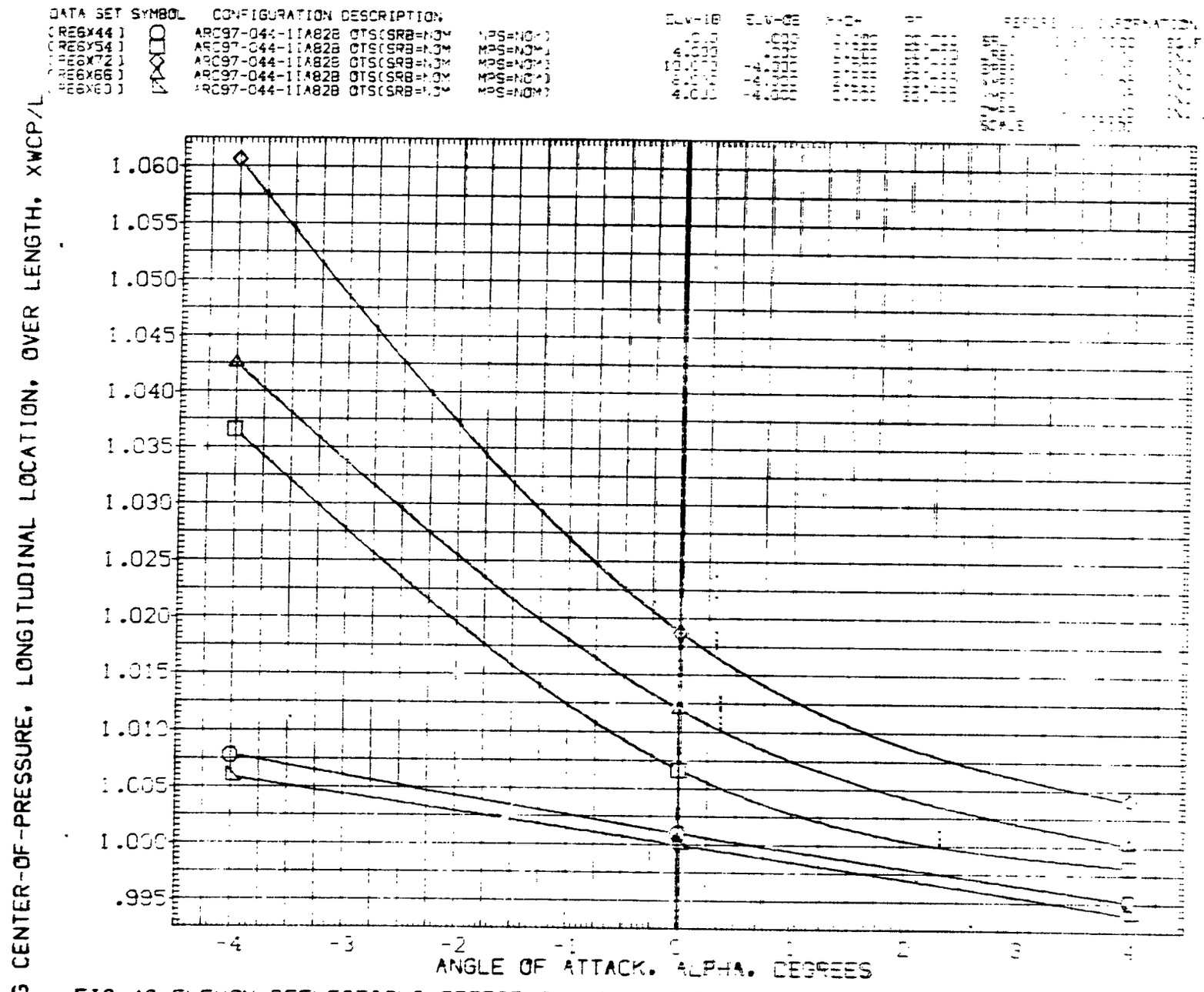


FIG.42 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 1.2

CA)BETA = .00

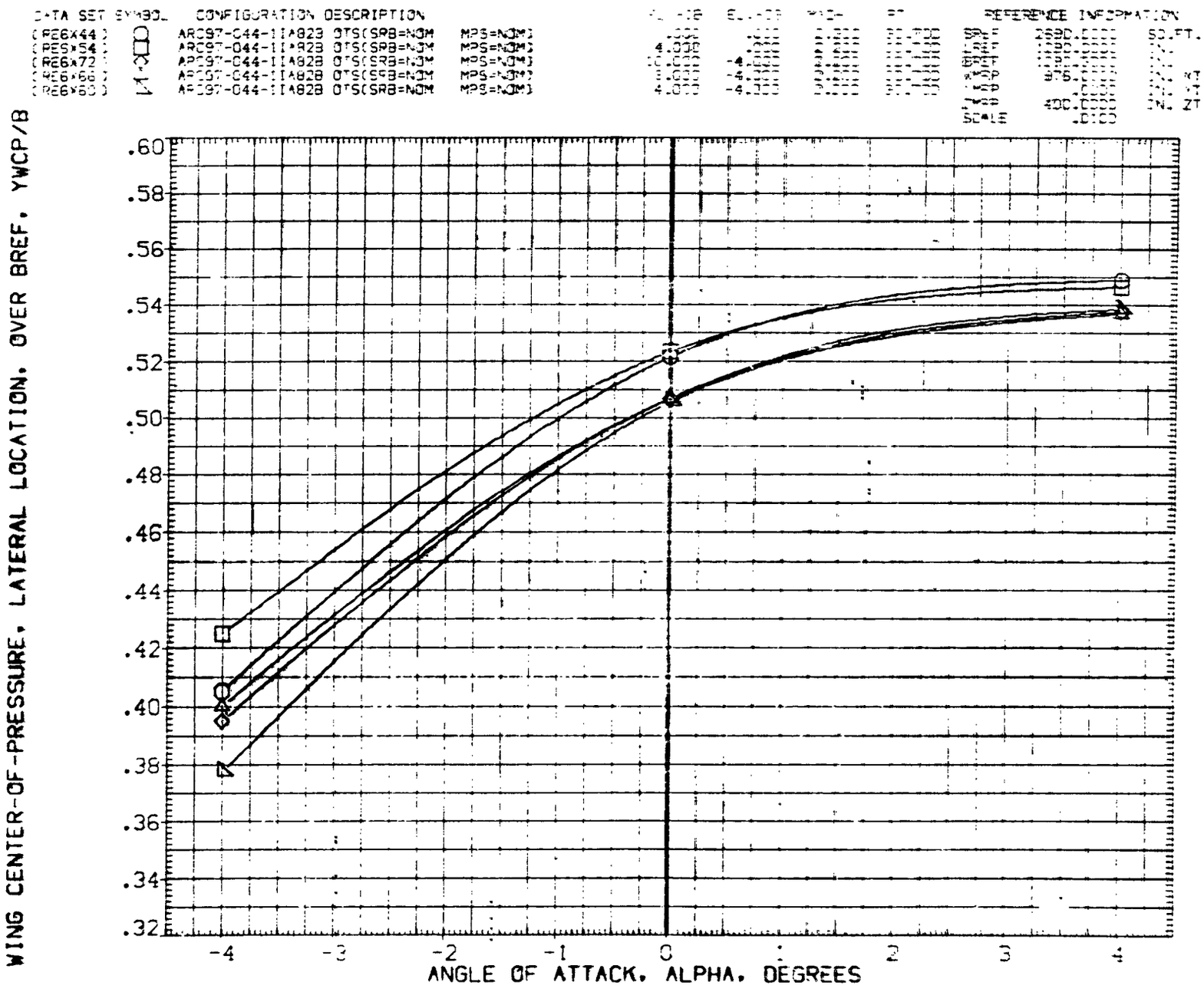
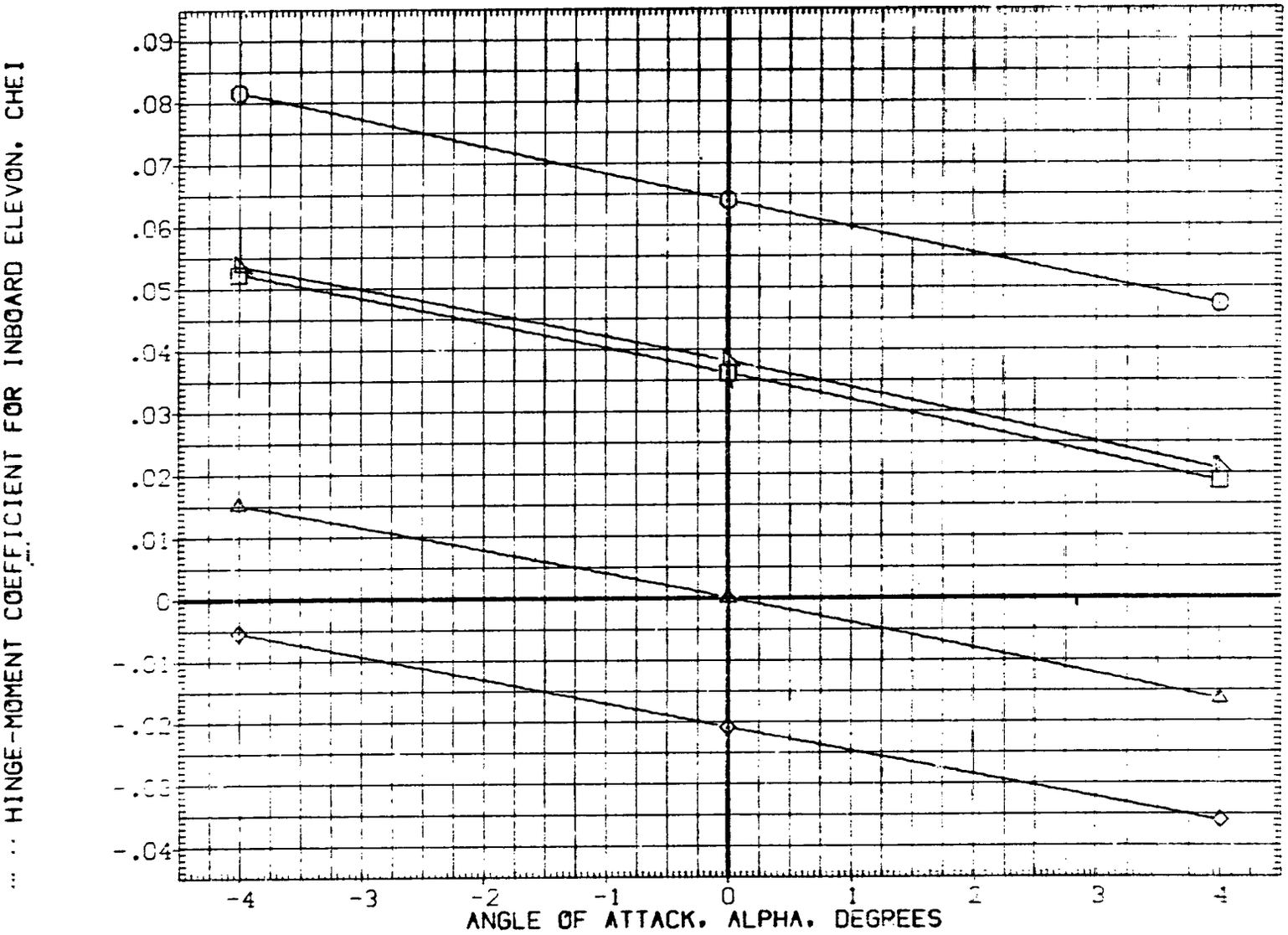


FIG.42 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN PITCH, POWER ON, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION
[illegible]	[illegible]	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.7110	SREF 21.0000
[illegible]	[illegible]	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	.000	1.550	30.7110	[illegible]
[illegible]	[illegible]	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	1.550	30.7110	[illegible]
[illegible]	[illegible]	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	1.550	30.7110	[illegible]
[illegible]	[illegible]	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	1.550	30.7110	[illegible]



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FIG.43 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER ON, MACH = 1.55

CA:BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X3[illegible]	ARC97-044-1IA82B 01[illegible](SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700
(RE6X50)	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	1.550	30.700
(RE6X68)	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6X62)	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6X56)	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

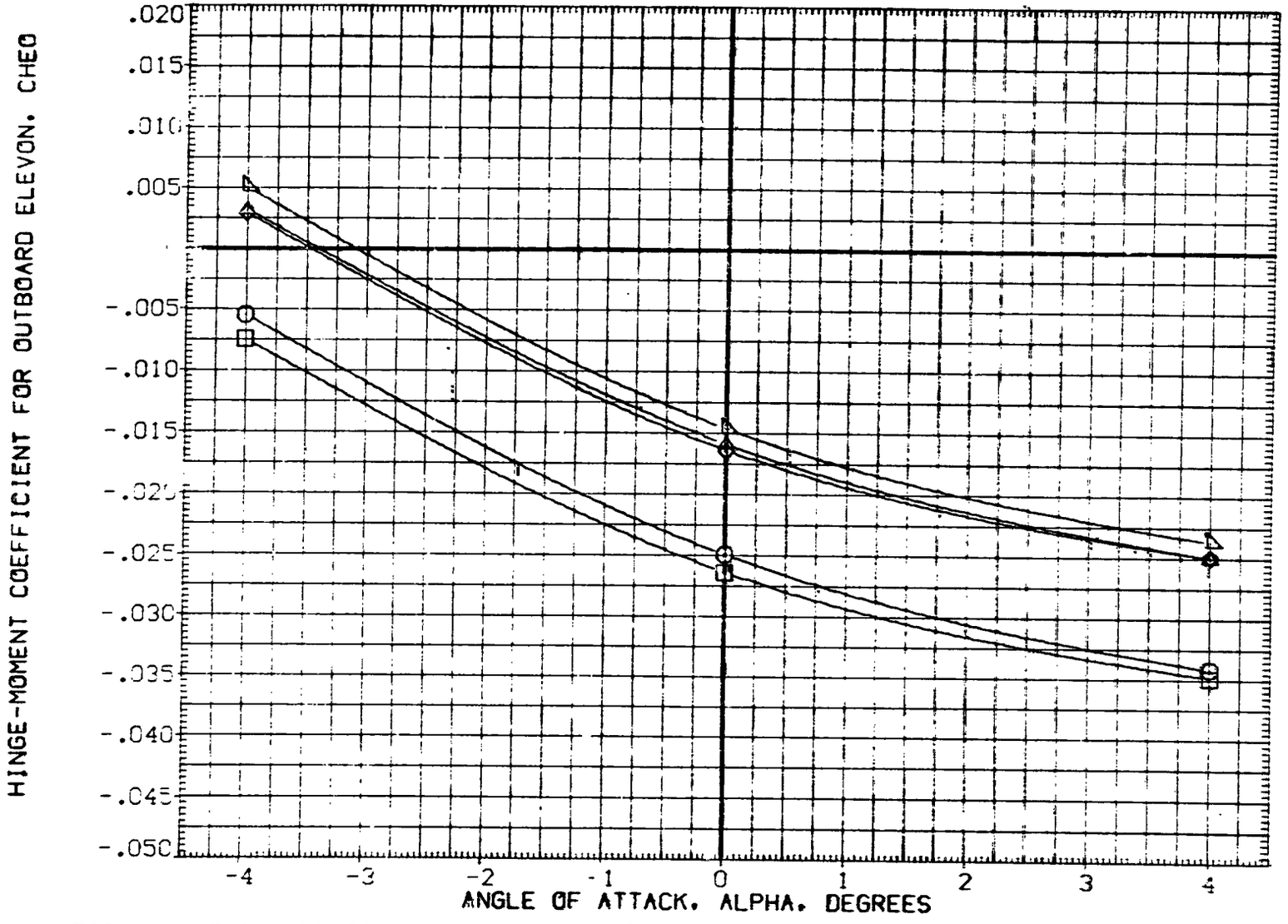


FIG.43 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER ON, MACH = 1.55

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-LB	ELV-RB	MACH	PT	REFERENCE INFORMATION
(RE6X37)	□	ARC97-044-1!A82B OTS(SRB=NOM , MPS=NOM)	.000	.000	2.000	30.000	SREF 60.FT.
(RE6X52)	◇	ARC97-044-1!A82B OTS(SRB=NOM MPS=NOM)	4.000	.000	2.000	30.000	
(RE6X70)	▽	ARC97-044-1!A82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	2.000	30.000	
(RE6X64)	△	ARC97-044-1!A82B OTS(SRB=NOM , MPS=NOM)	8.000	-4.000	2.000	30.000	
(RE6X58)	◁	ARC97-044-1!A82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	2.000	30.000	

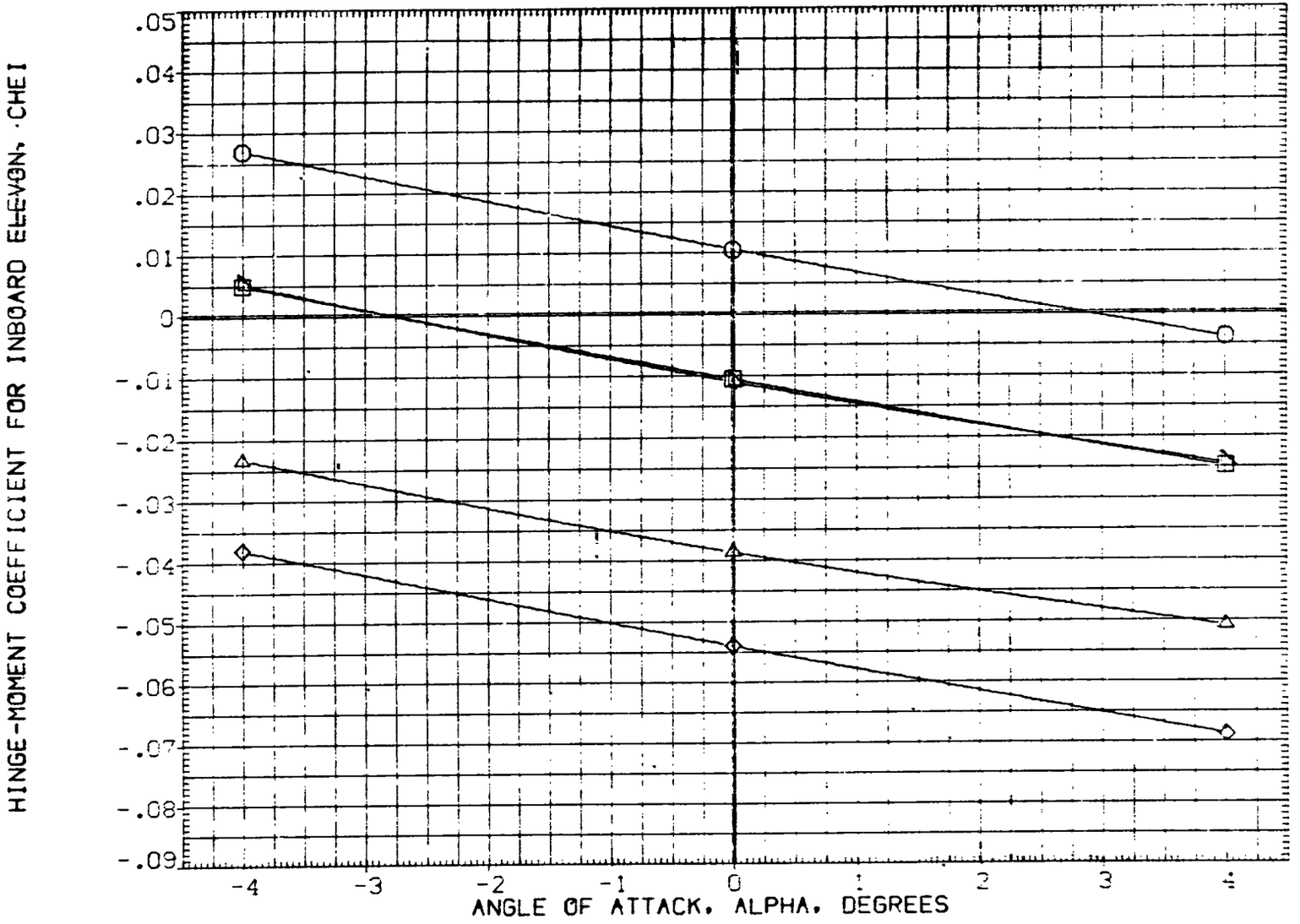


FIG.44 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER ON, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6X37)	○	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.000	30.700
(RE6X52)	□	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	.000	2.000	30.700
(RE6X70)	△	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	2.000	30.700
(RE6X64)	◇	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	2.000	30.700
(RE6X58)	▽	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.8000	IN.
BREF	1980.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

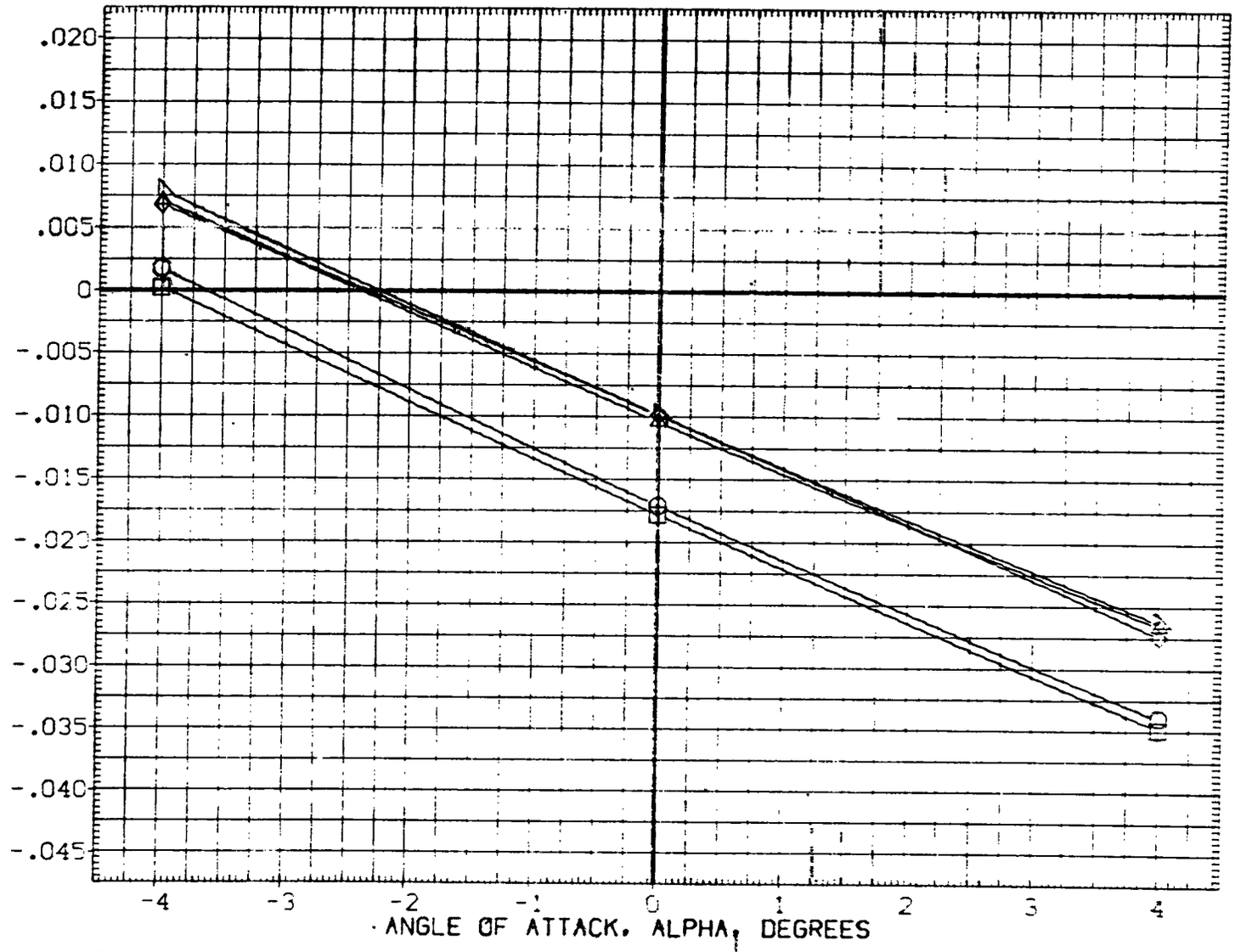


FIG.44 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER ON, MACH = 2.0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	EL.-OB	MACH	FT
(RE6X44)	CD-N	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.000
(RE6X54)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	.000	2.200	30.000
(RE6X72)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	2.200	30.000
(RE6X66)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	2.200	30.000
(RE6X60)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	2.200	30.000

REFERENCE INFORMATION

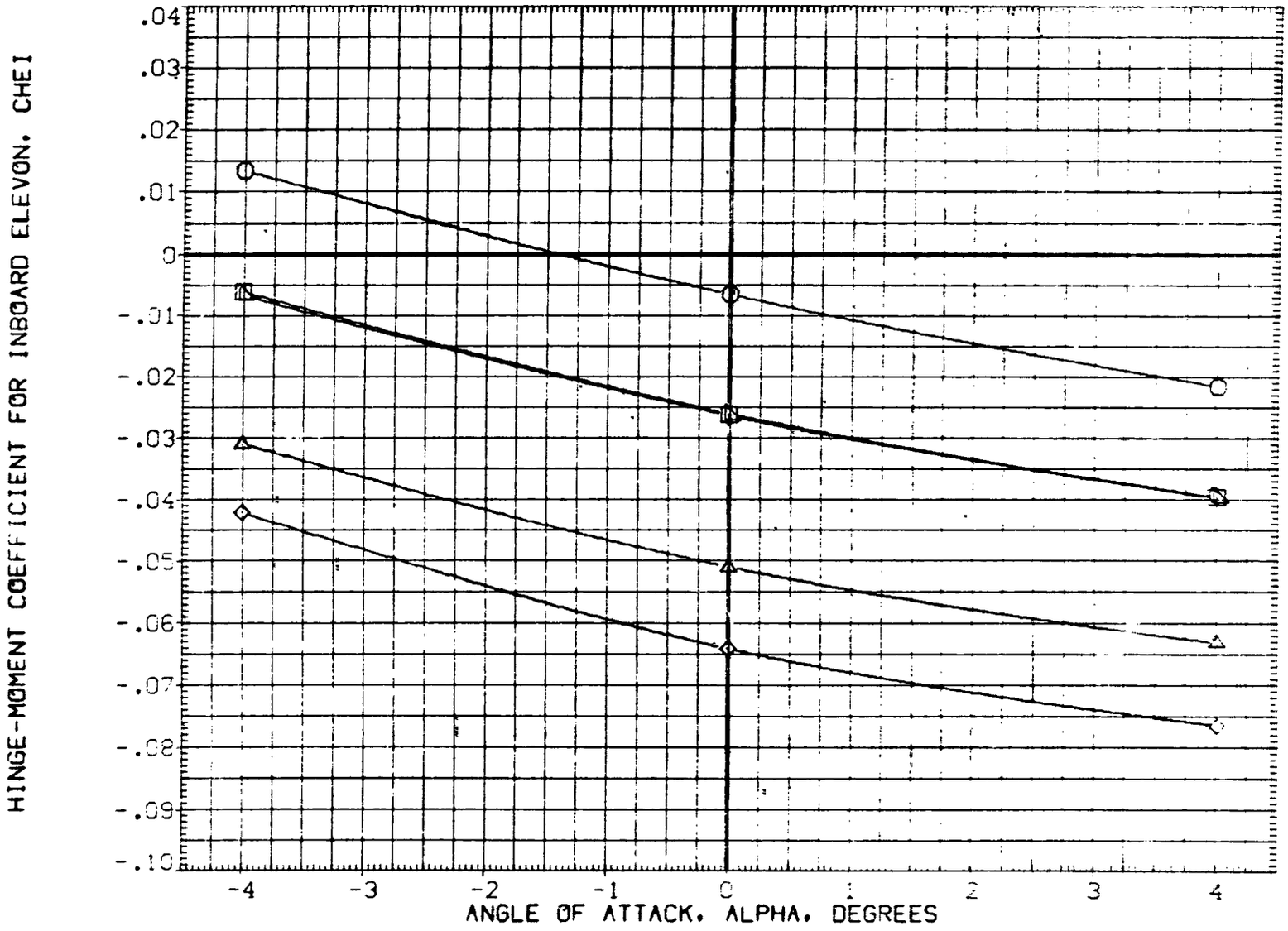


FIG.45 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER ON, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6X44		ARC97-044-11A82B 3TS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700
(RE6X54		ARC97-044-11A82B 3TS(SRB=NOM	MPS=NOM)	4.000	.000	2.200	30.700
(RE6X72		ARC97-044-11A82B 3TS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.200	30.700
(RE6X68		ARC97-044-11A82B 3TS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.200	30.700
(RE6X60		ARC97-044-11A82B 3TS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

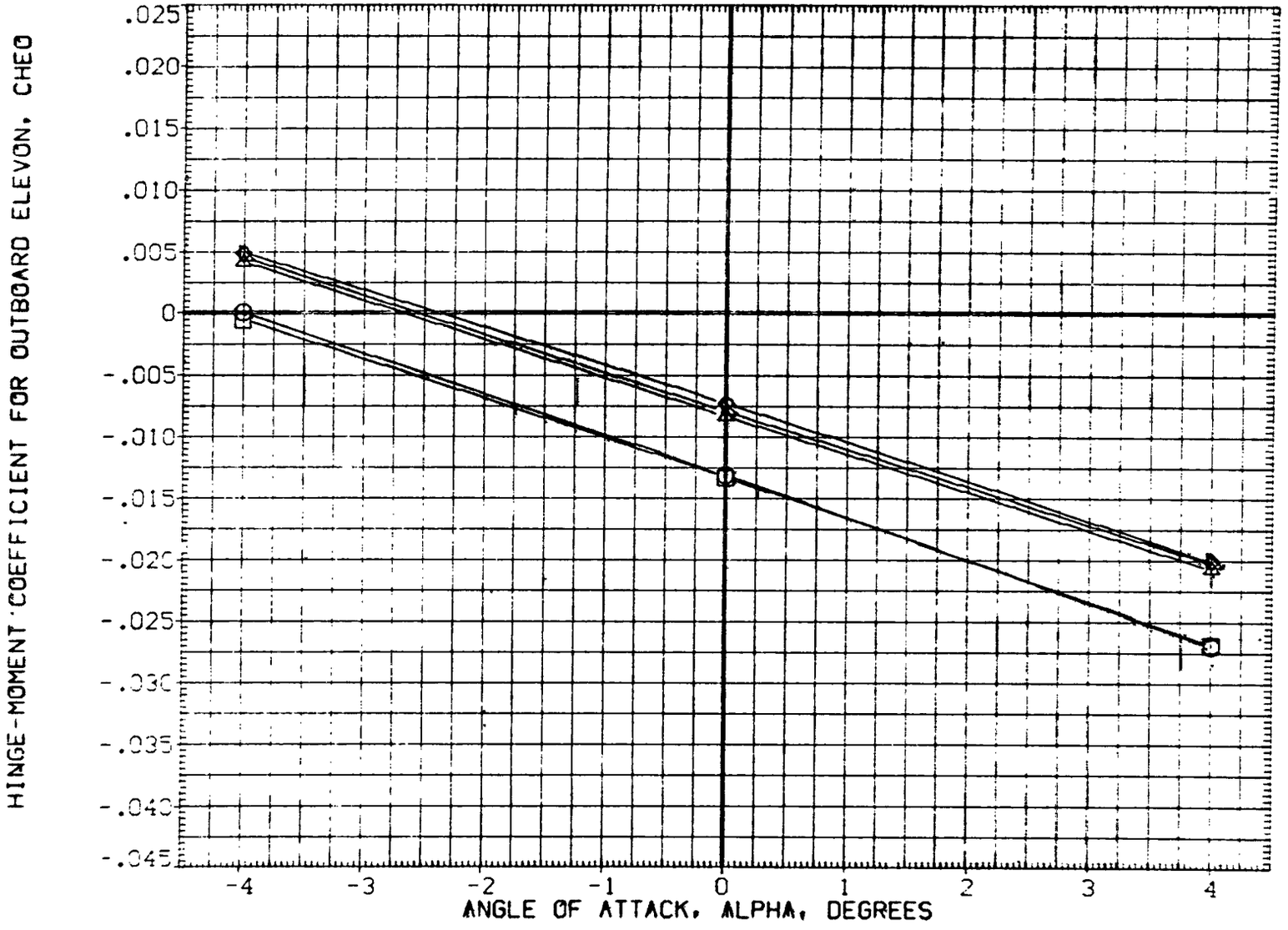


FIG.45 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PITCH, POWER ON, MACH = 2.2

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y30)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700
(RE6Y50)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	1.550	30.700
(RE6Y68)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6Y62)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6Y56)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1680.0000	FT.
BREF	1680.0000	FT.
XMRP	978.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

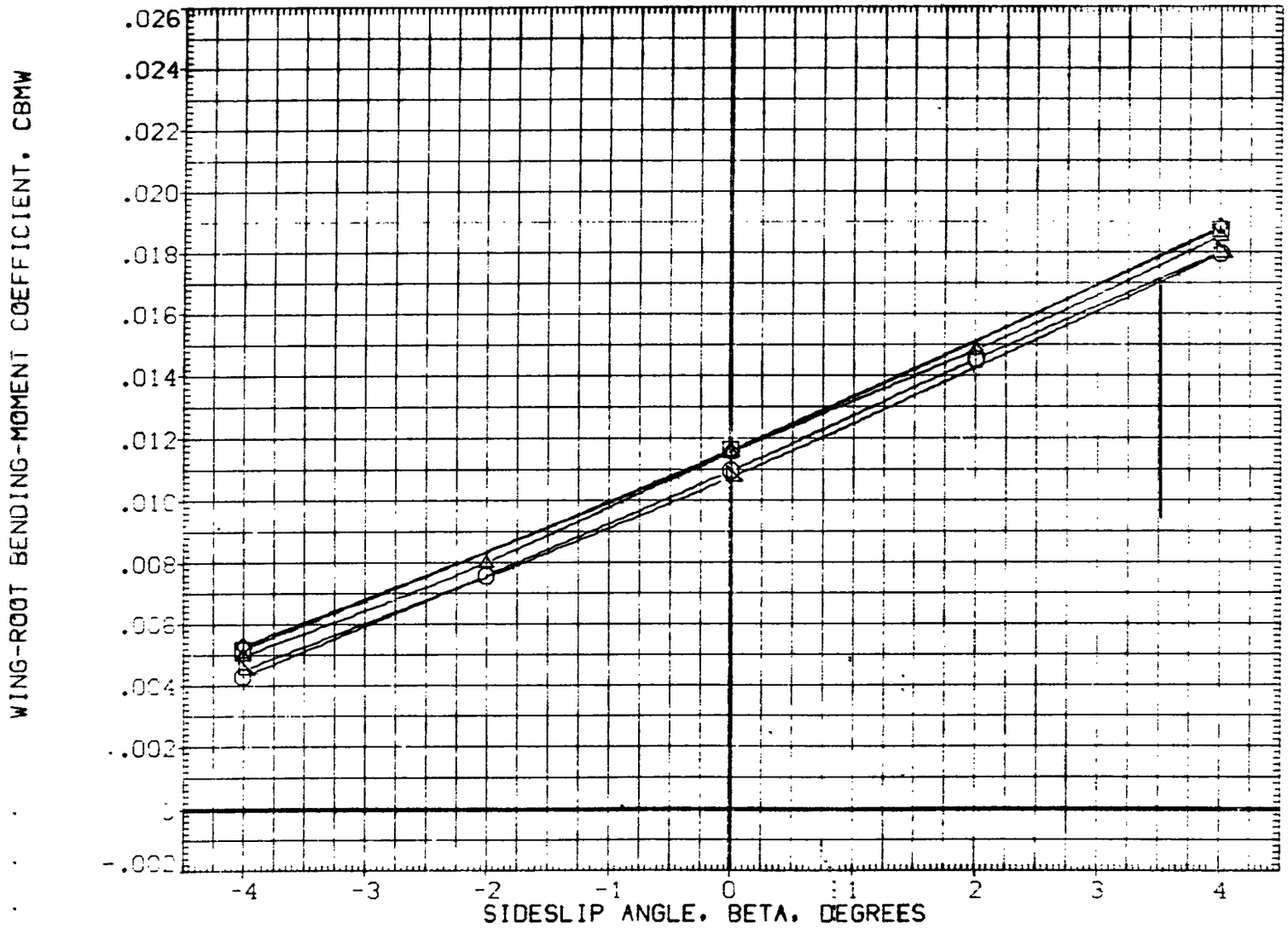


FIG.46 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y30)		AR397-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6Y50)		AR397-044-11A82B OTS(SRB=NOM MPS=NOM)	4.000	.000	1.550	30.700
(RE6Y56)		AR397-044-11A82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6Y62)		AR397-044-11A82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6Y56)		AR397-044-11A82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

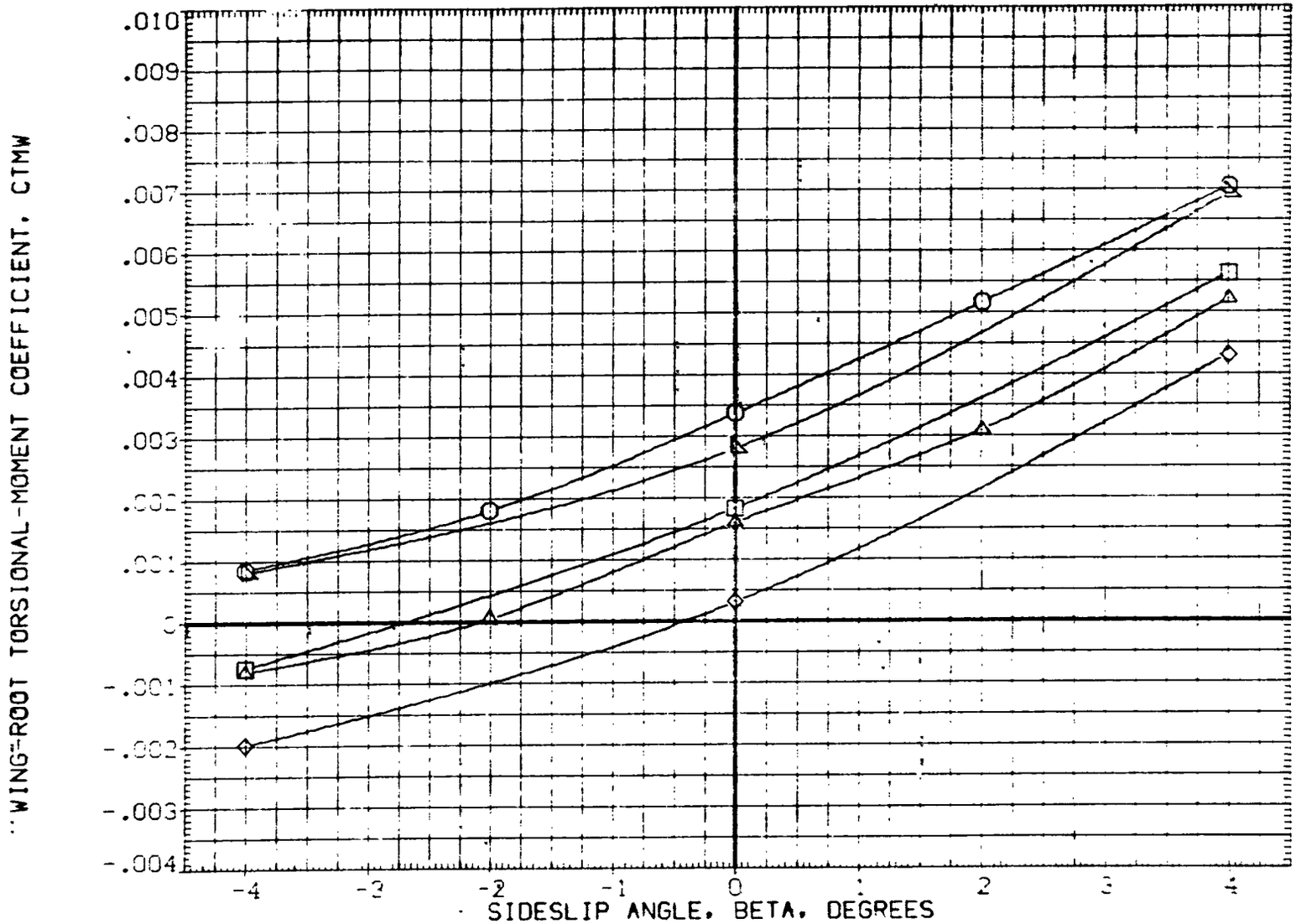


FIG.46 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y30)	□	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6Y50)	◇	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	.000	1.550	30.700
(RE6Y68)	△	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6Y62)	○	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6Y58)	▽	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	1.550	30.700

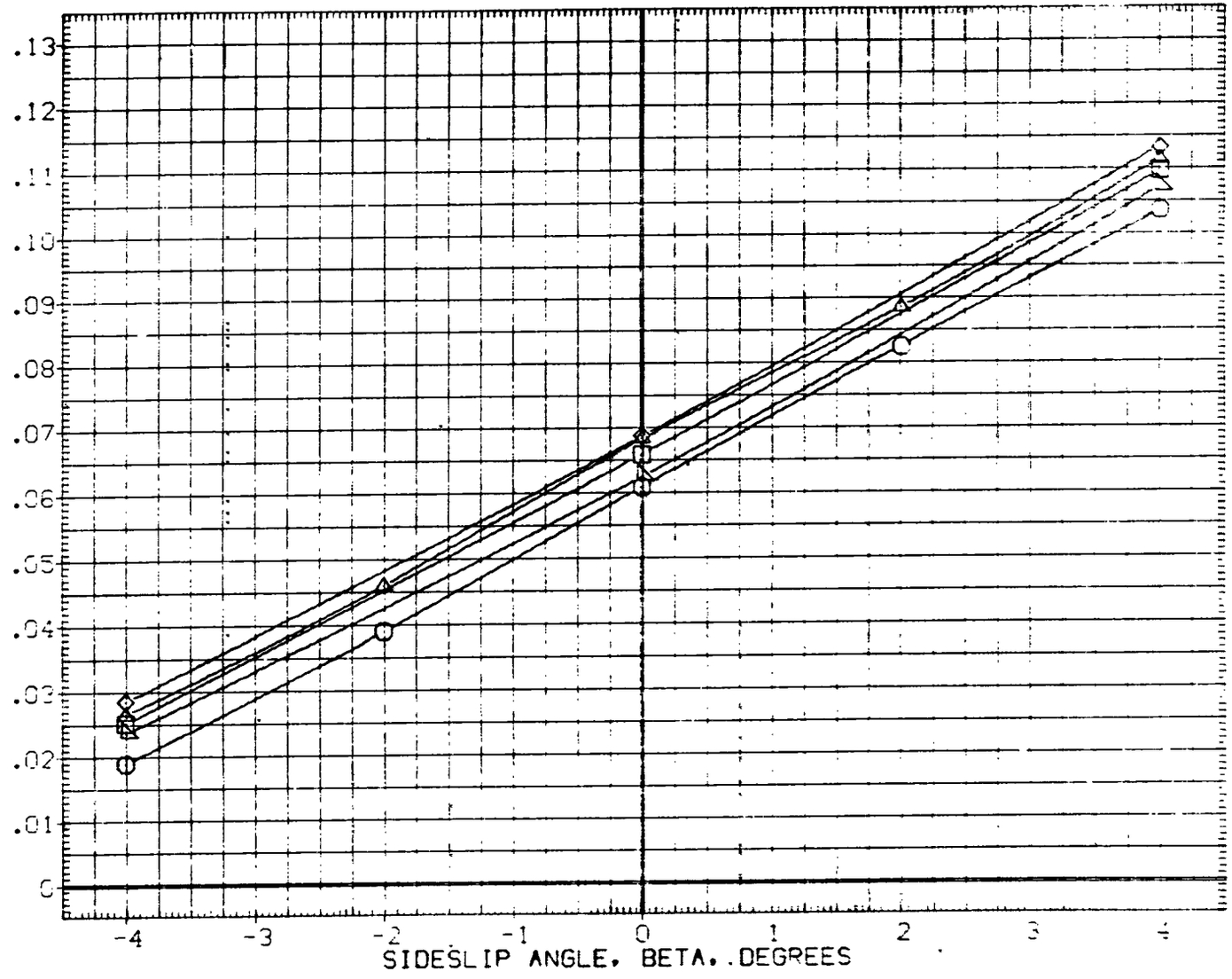


FIG.46 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y30)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.000
(RE6Y50)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	4.000	.000	1.550	30.000
(RE6Y68)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	1.550	30.000
(RE6Y62)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	1.550	30.000
(RE6Y56)		ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	1.550	30.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	1040.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	400.0000	IN. Z
SCALE	.0100	

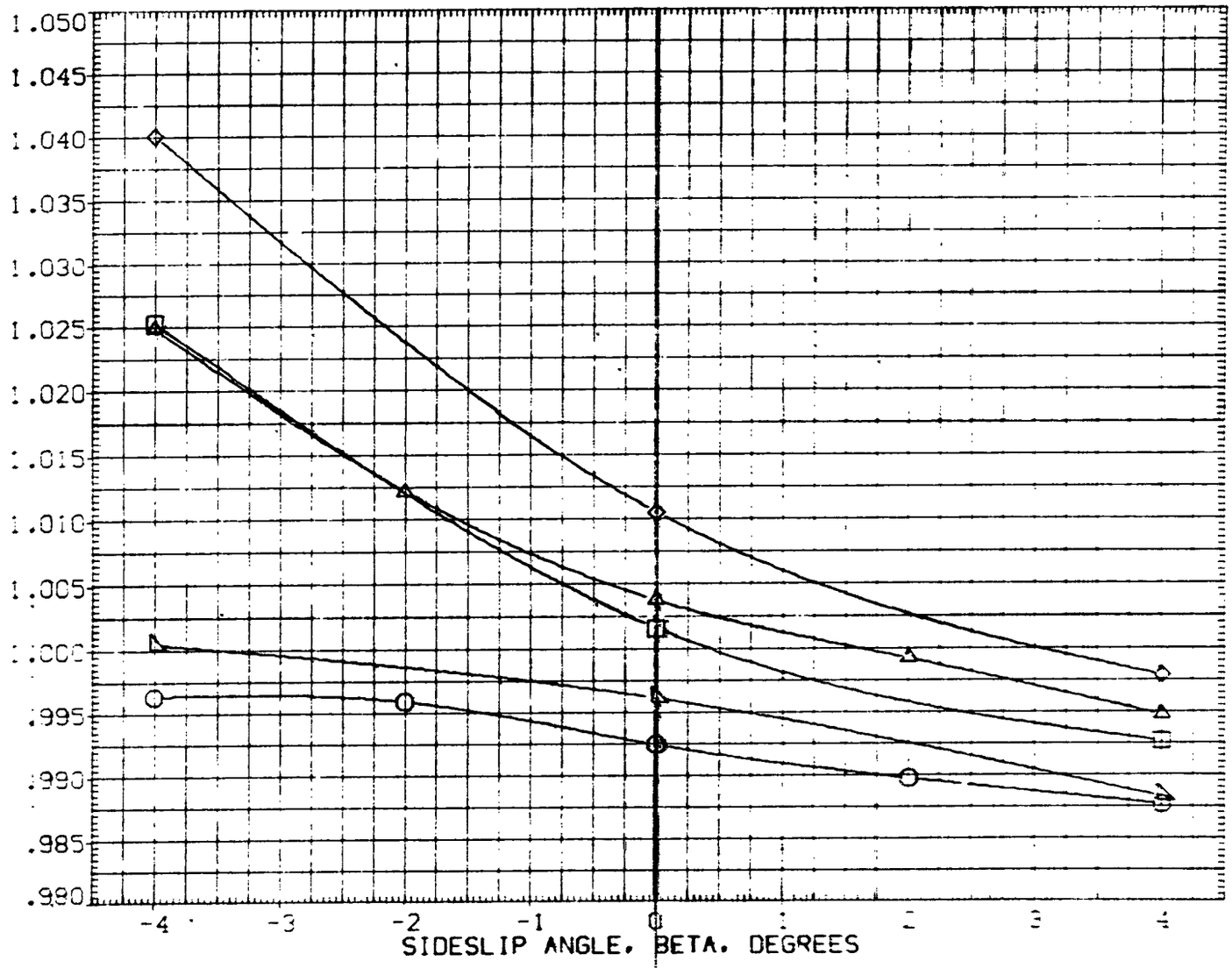


FIG.46 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 1.55

(A)A_PHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE INFORMATION		
(RE6Y30)	[illegible]	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	1.550	30.700	SREF	[illegible]	SQ.FT.
(RE6Y60)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	1.550	30.700	CBREF	[illegible]	IN.
(RE6Y90)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	1.550	30.700	BREF	[illegible]	IN.
(RE6Y63)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	1.550	30.700	XMRP	[illegible]	IN.
(RE6Y62)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	1.550	30.700	YMRP	[illegible]	IN.
								ZMRP	[illegible]	IN.
								SCALE	.0100	

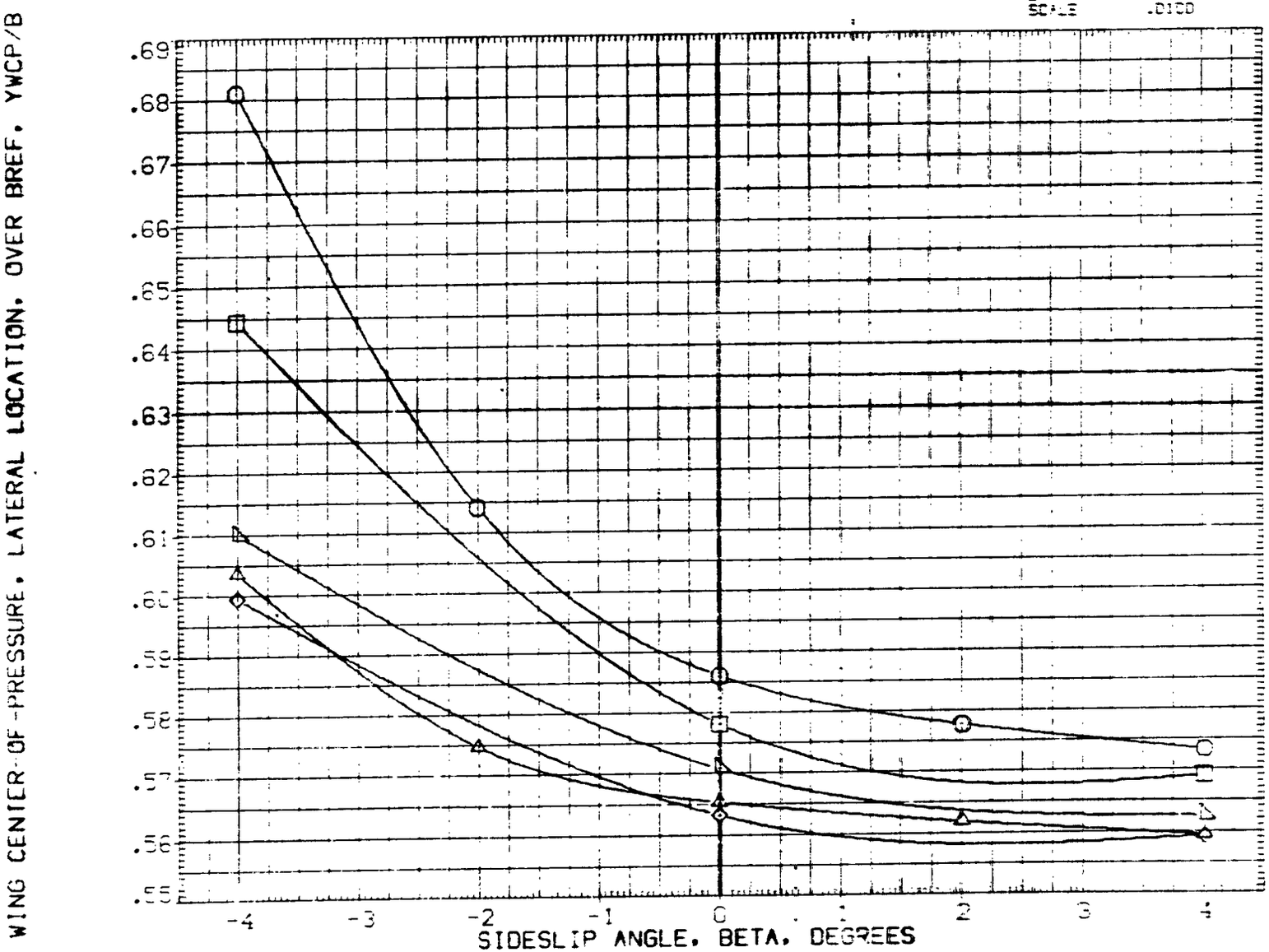


FIG.46 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER [illegible], MACH = 1.55

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(REEN37)		ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	[illegible]	.000	2.000	30.700
(REEN52)		ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	[illegible]	[illegible]	30.700
(REEN70)		ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	[illegible]	-4.000	[illegible]	30.700
(REEN64)		ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.000	30.700
(REEN58)		ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRC	975.0000	IN. XT
YMRC	.0000	IN. YT
ZMRC	400.0000	IN. ZT
SCALE	.0150	

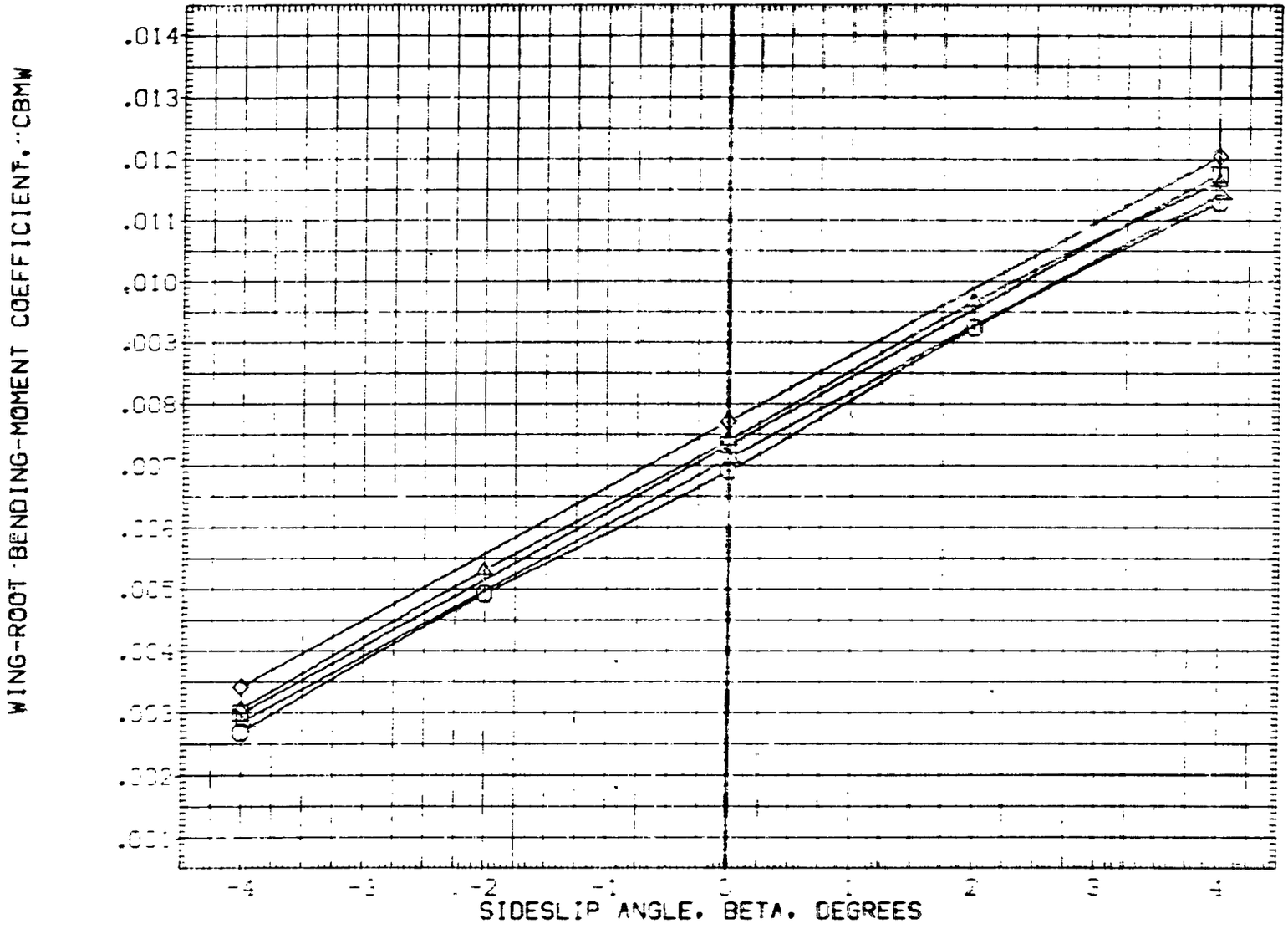


FIG.47 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN VAR. POWER ON, MACH = 2.0

CA(ALPHA = .00

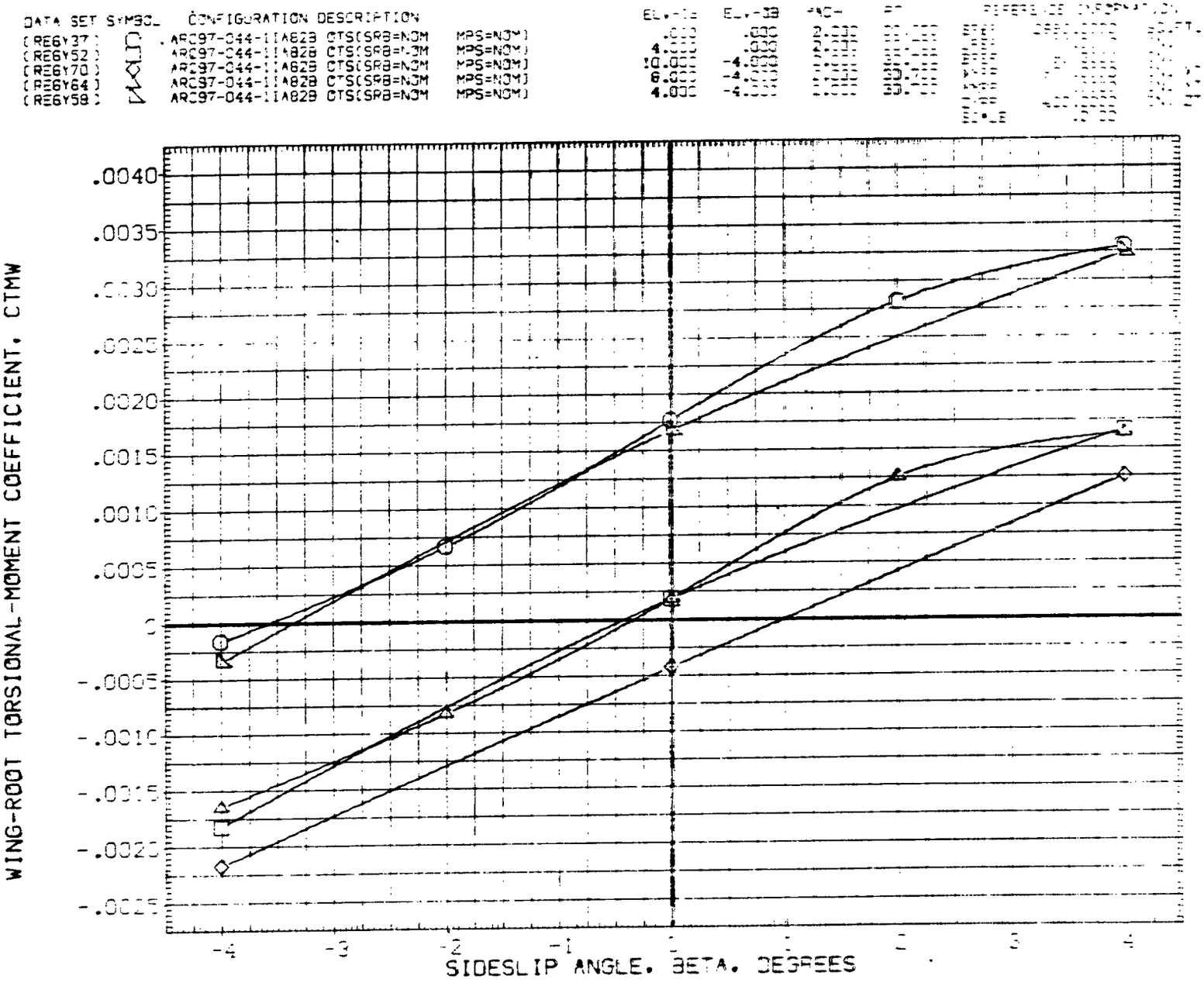


FIG.47 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN [illegible]

(ALPHA = .00

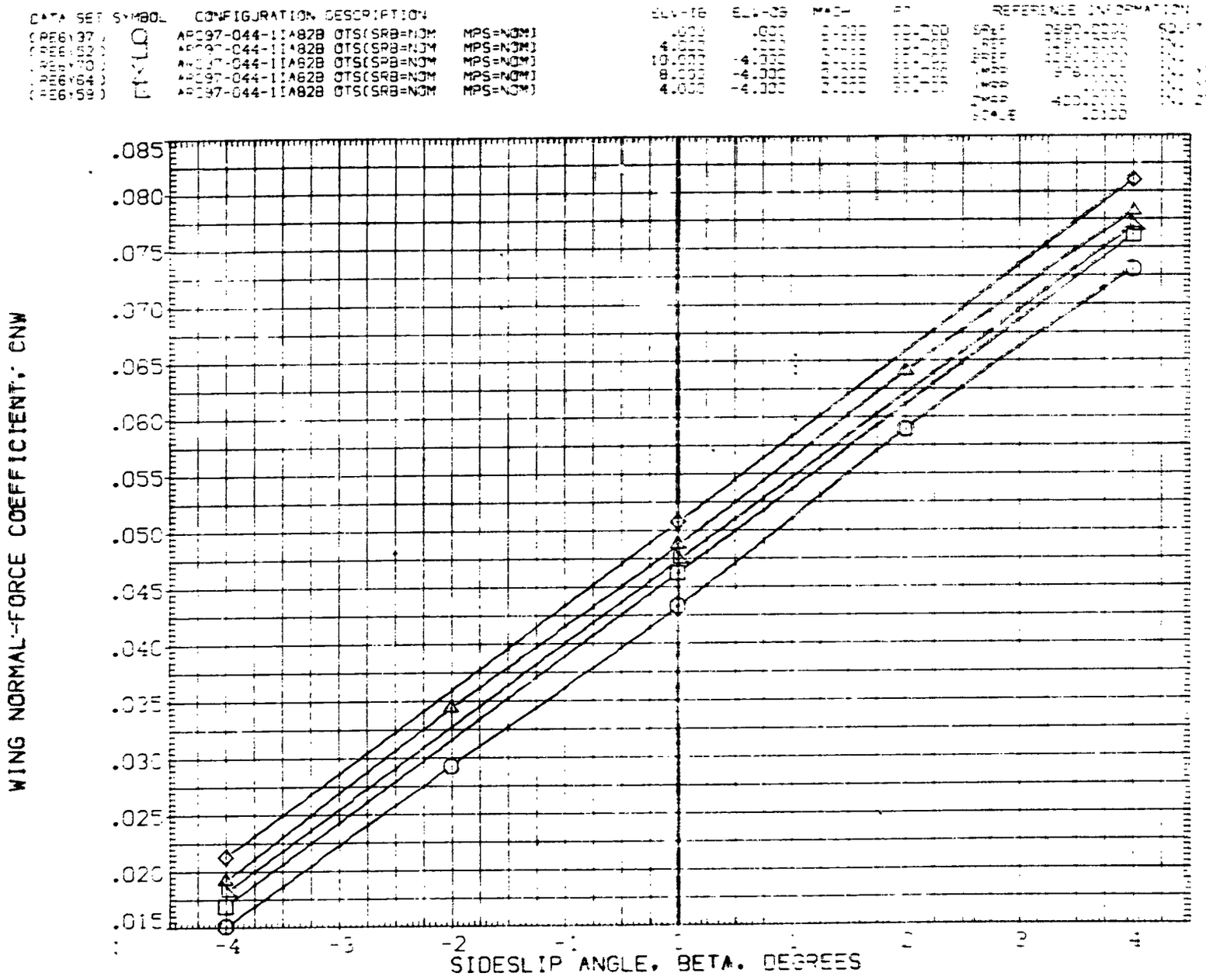


FIG.47 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.0

CA)ALPHA = .00

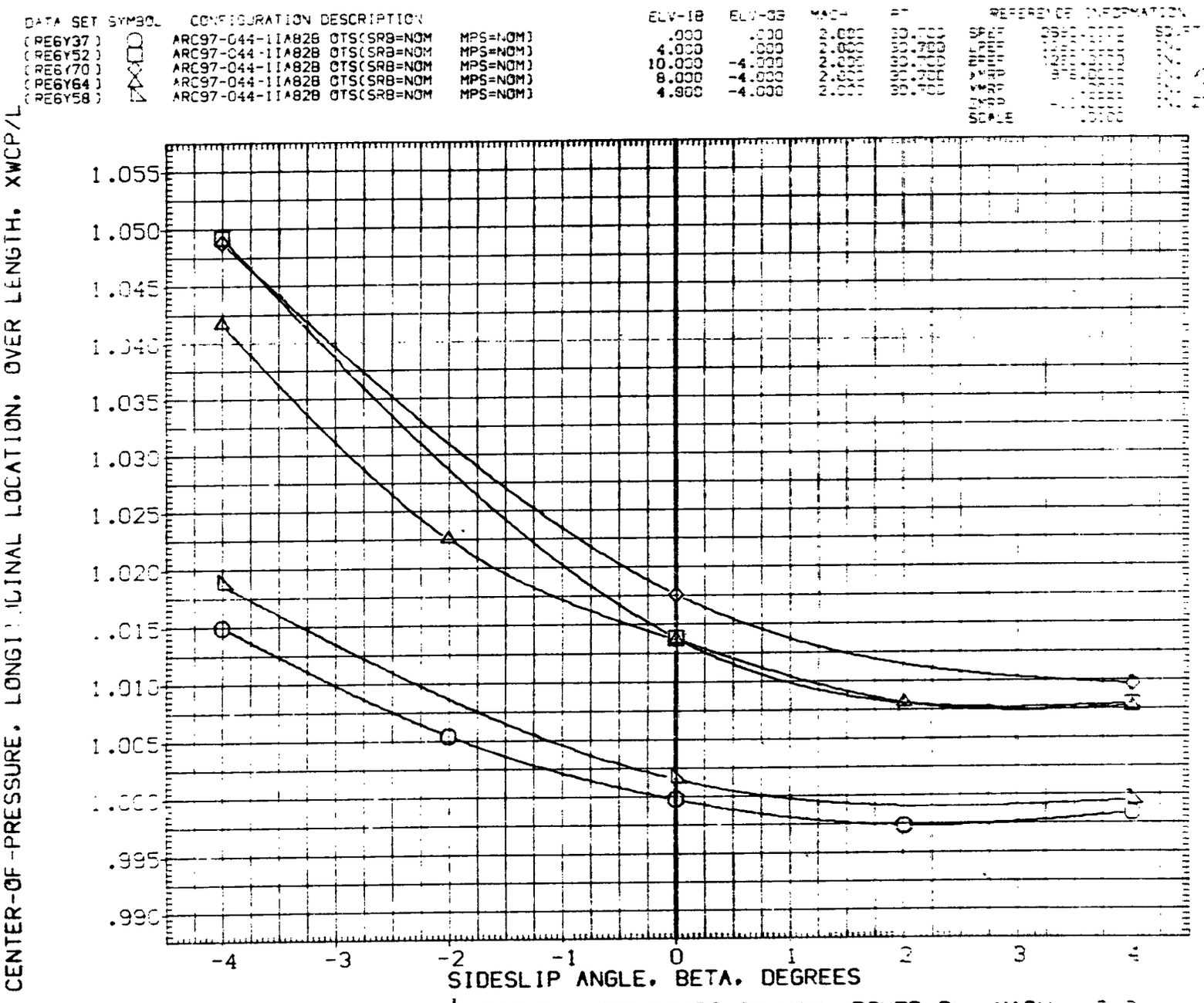


FIG.47 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEV-IB	ELEV-OB	MACH	ALT
(REGY70)	□	ARC97-044-111A928 OTS(SRB=NOM	MPS=NOM)	.000	.000	2.000	30.700
(REGY52)	◇	ARC97-044-111A928 OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.000	30.700
(REGY70)	△	ARC97-044-111A928 OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.000	30.700
(REGY64)	○	ARC97-044-111A928 OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.000	30.700
(REGY58)	◁	ARC97-044-111A928 OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.1100	

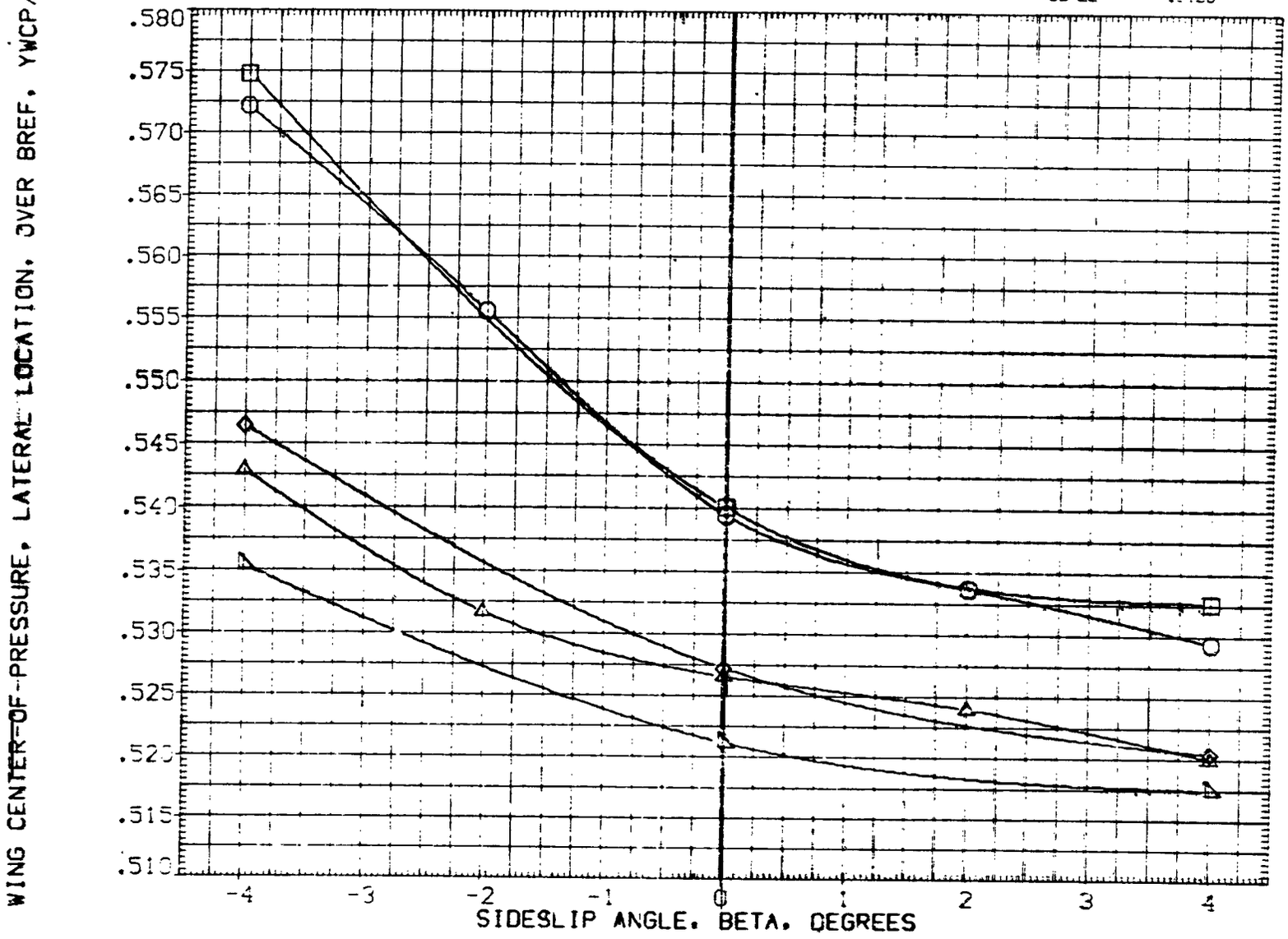


FIG.47 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT	REFERENCE PARAMETERS
(RE6Y44)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700	SREF 2919.47000 SCALE 1.0000
(RE6Y54)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.200	30.700	
(RE6Y72)		ARC97-044-1.A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.200	30.700	
(RE6Y66)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.200	30.700	
(RE6Y60)		ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.200	30.700	

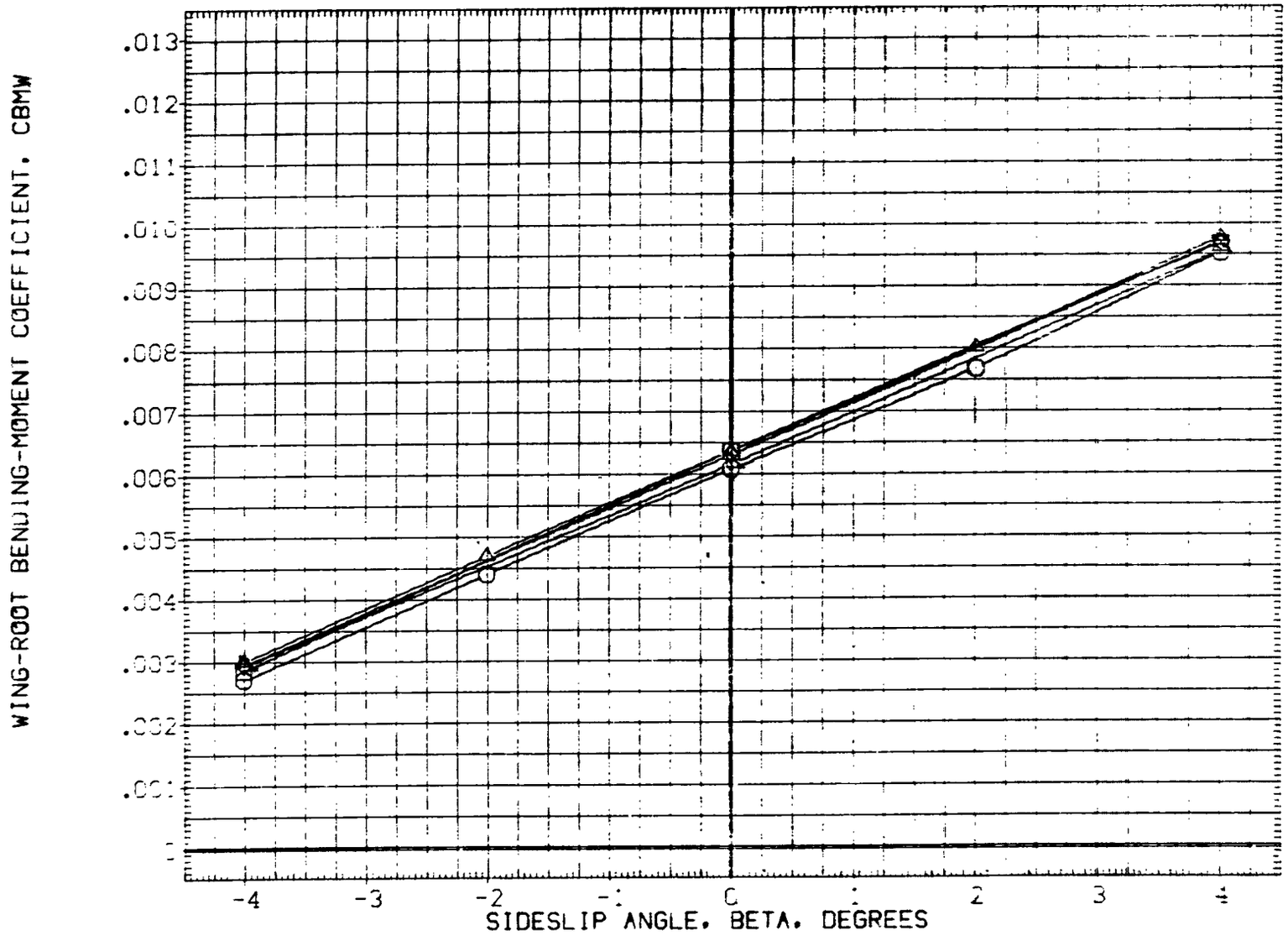


FIG.48 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	PT
(RE6Y44)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	30.700
(RE6Y54)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.200	30.700
(RE6Y72)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.200	30.700
(RE6Y66)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.200	30.700
(RE6Y60)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

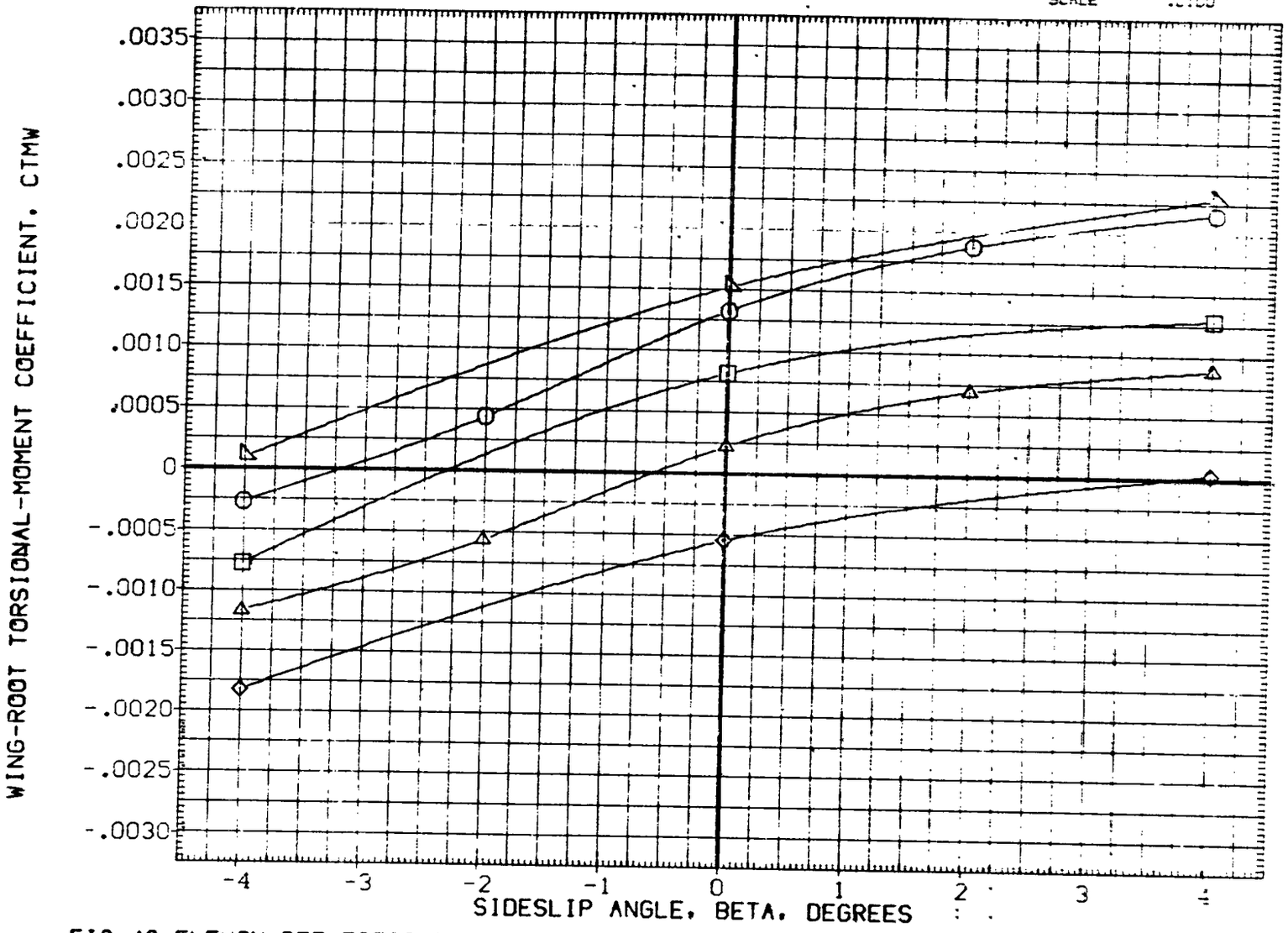


FIG.48 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	
(RE6Y44)	□	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)
(RE6Y54)	◇	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)
(RE6Y72)	⋈	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)
(RE6Y66)	△	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)
(RE6Y60)	◁	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)

ELV-IB	ELV-OB	MACH	PT
.000	.000	2.200	30.700
4.000	.000	2.200	30.700
10.000	-4.000	2.200	30.700
8.000	-4.000	2.200	30.700
4.000	-4.000	2.200	30.700

REFERENCE INFORMATION

SREF	[illegible]	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN. XT
YMRP	[illegible]	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

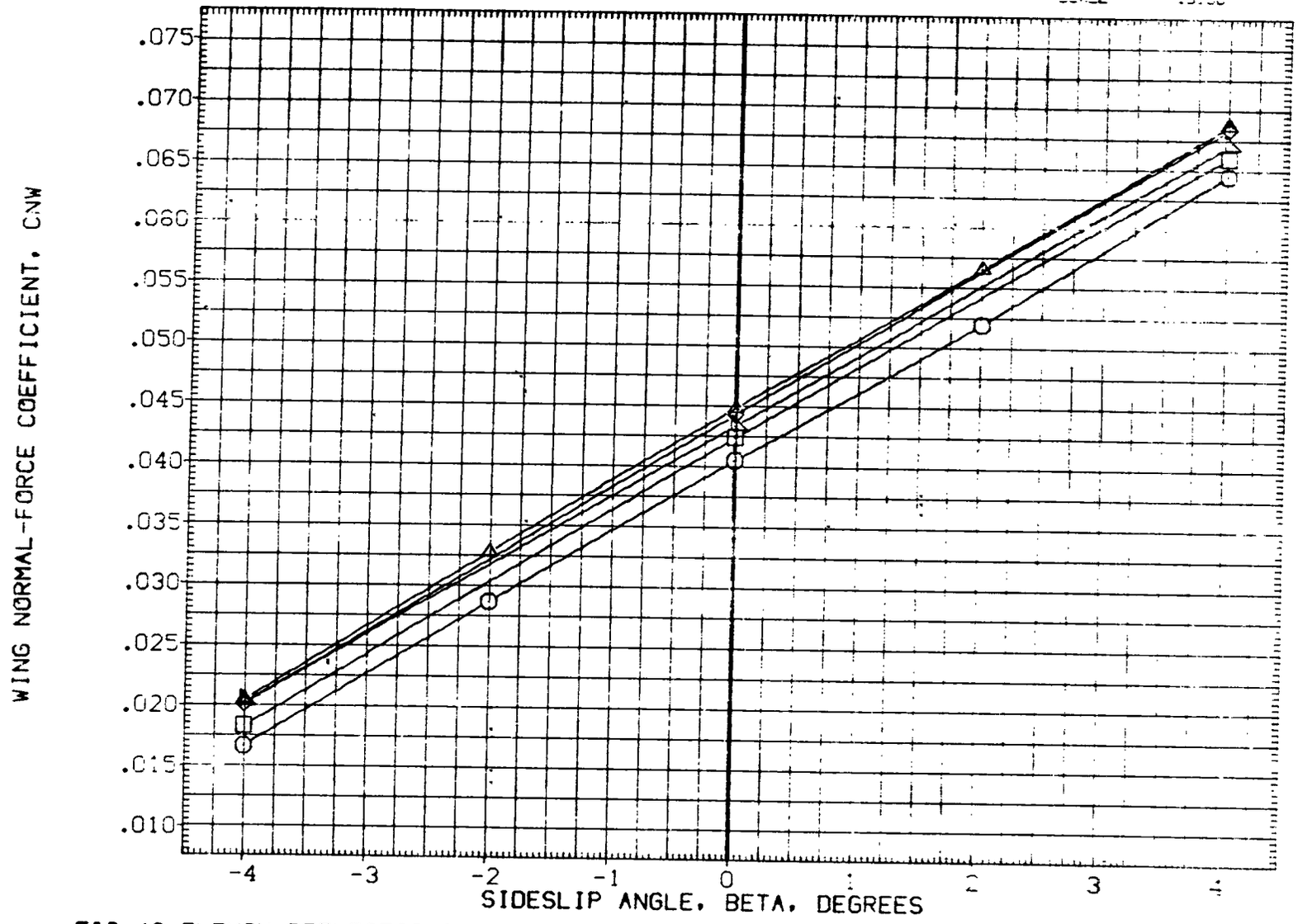


FIG.48 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(R66:44)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	2.200	30.700
(R66:54)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	.000	2.200	30.700
(R66:72)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	10.000	-4.000	2.200	30.700
(R66:66)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	8.000	-4.000	2.200	30.700
(R66:60)		ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	4.000	-4.000	2.200	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

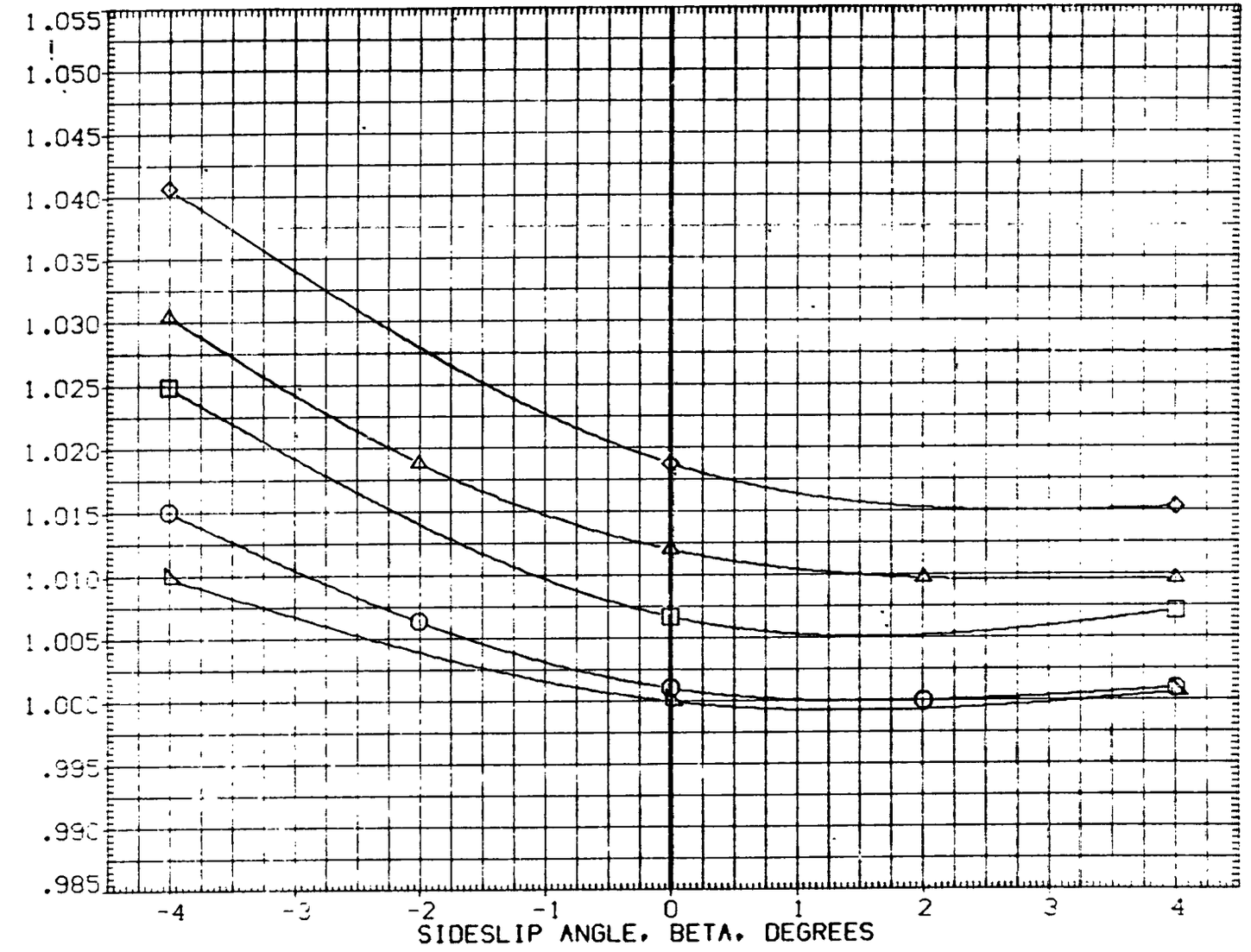


FIG.48 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.2

(A)ALPHA = .00

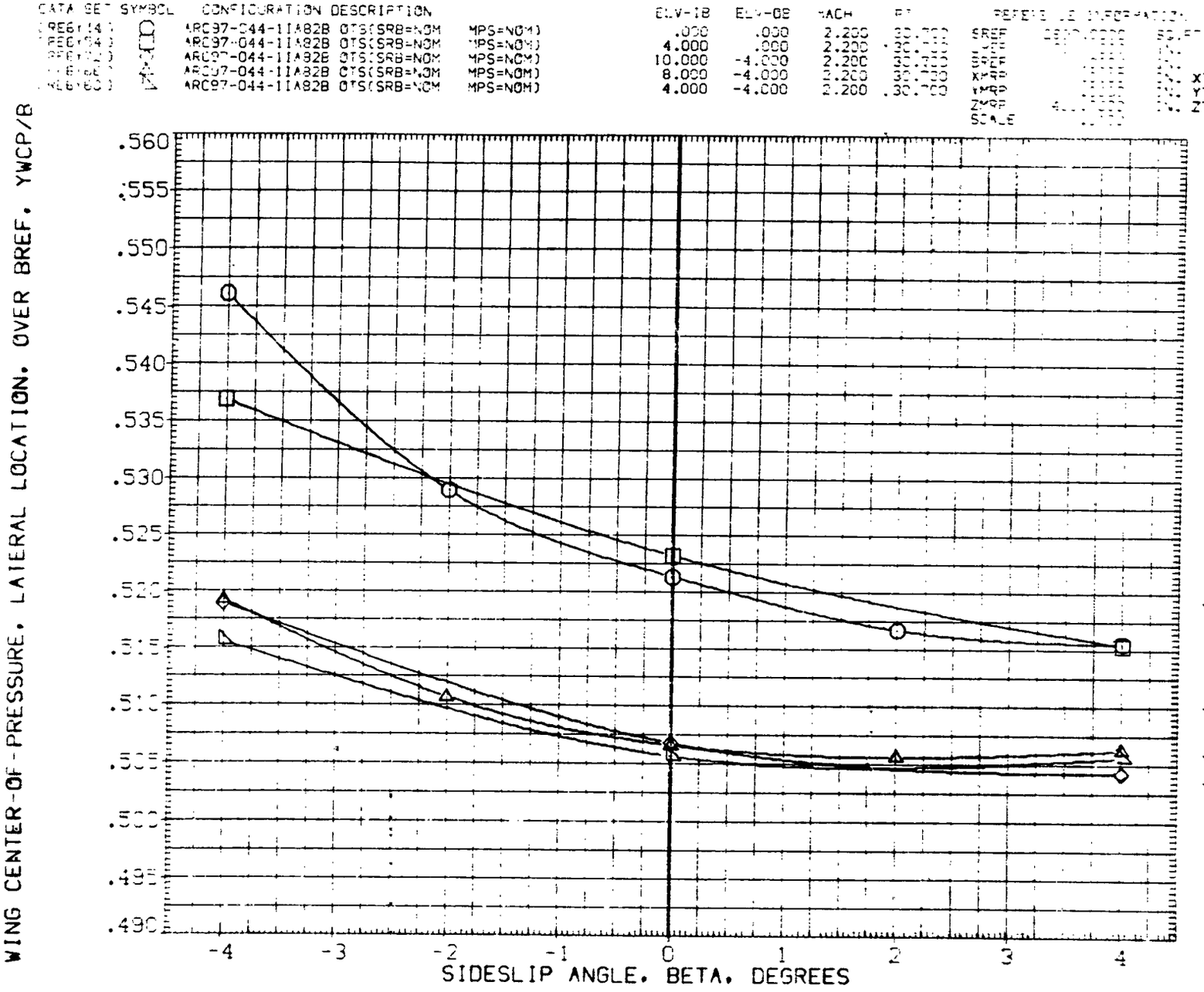


FIG.48 ELEVON DEFLECTIONS EFFECT ON WING LOADS IN YAW, POWER ON, MACH = 2.2

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PT
(RE6Y30)	○	ARC97-044-11A828 OTS(SRB=NOM MPS=NOM)	.000	.000	1.550	30.700
(RE6Y50)	□	ARC97-044-11A828 OTS(SRB=NOM : MPS=NOM)	4.000	.000	1.550	30.700
(RE6Y68)	△	ARC97-044-11A828 OTS(SRB=NOM ' MPS=NOM)	10.000	-4.000	1.550	30.700
(RE6Y62)	◇	ARC97-044-11A828 OTS(SRB=NOM ' MPS=NOM)	8.000	-4.000	1.550	30.700
(RE6Y56)	⊲	ARC97-044-11A828 OTS(SRB=NOM . MPS=NOM)	4.000	-4.000	1.550	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
CBAR	129.3000	IN.
BREF	1291.3000	IN.
XMRP	975.1000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
-.03
-.04
-.05

-4 -3 -2 -1 0 1 2 3 4

SIDESLIP ANGLE, BETA, DEGREES

FIG.49 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER ON, MACH = 1.55

(A)ALPHA = .00

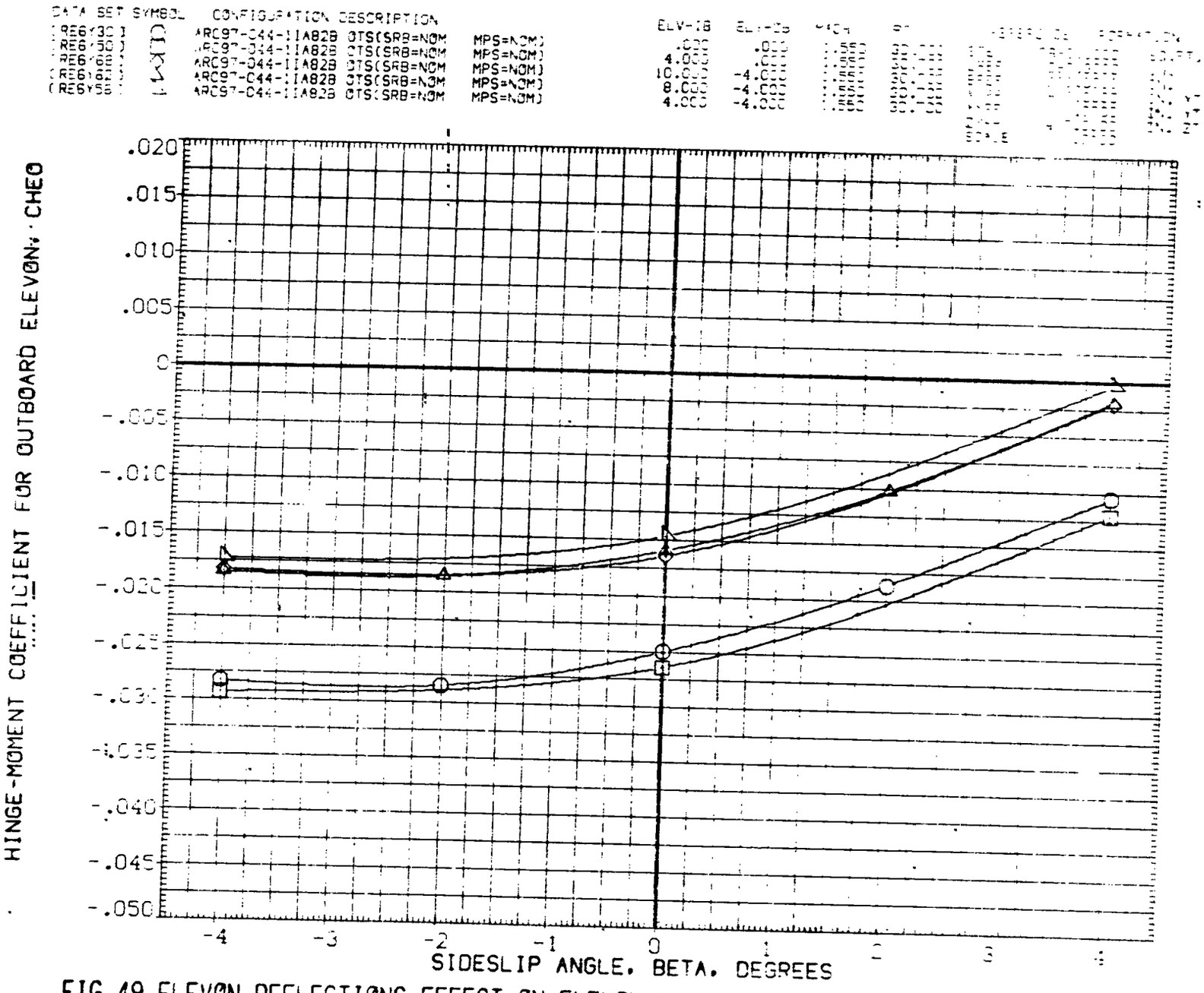


FIG.49 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER ON, MACH = 1.55

(A)ALPHA = .00

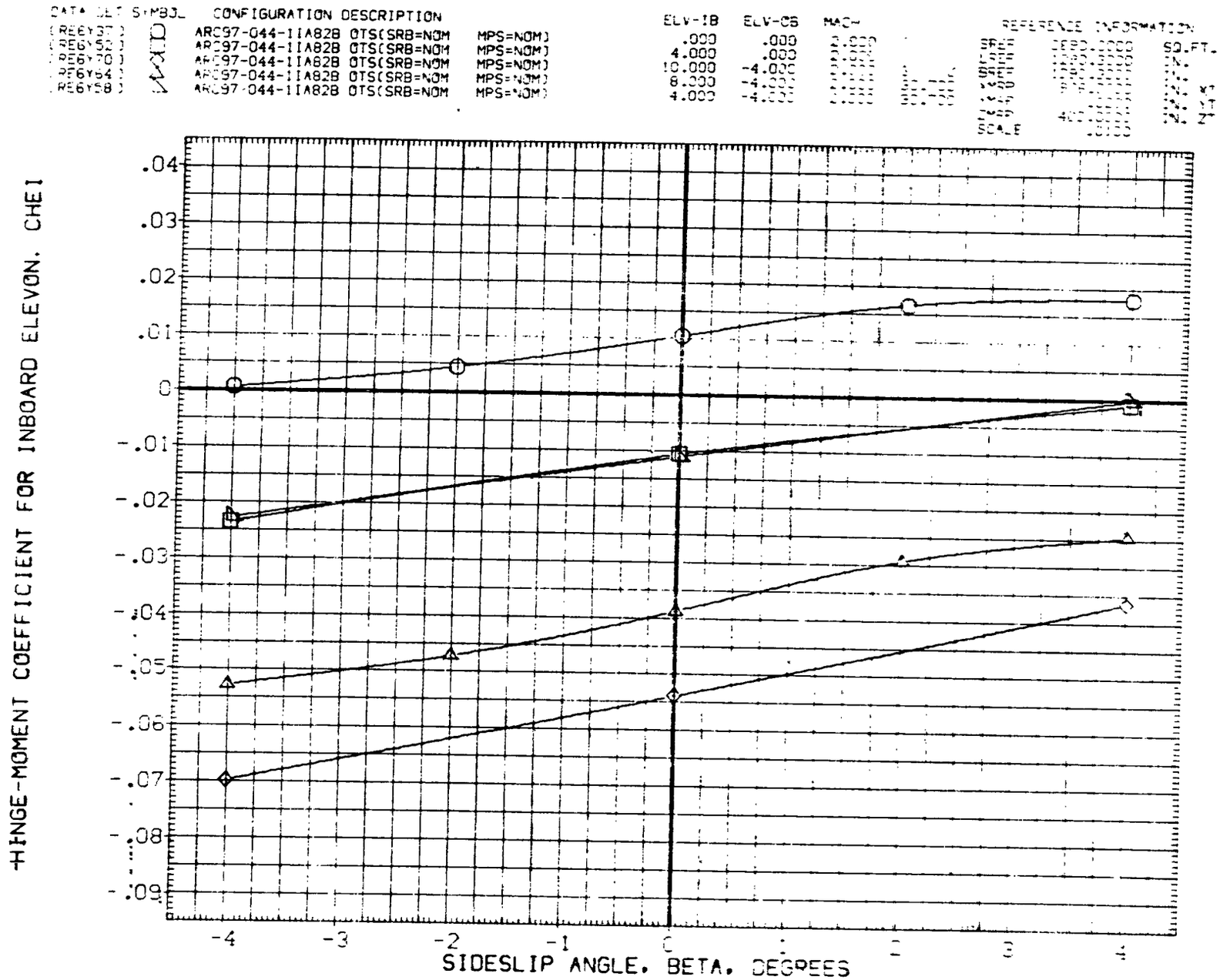


FIG.50 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN [illegible], POWER ON, MACH = 2.0

(A)ALPHA = .00

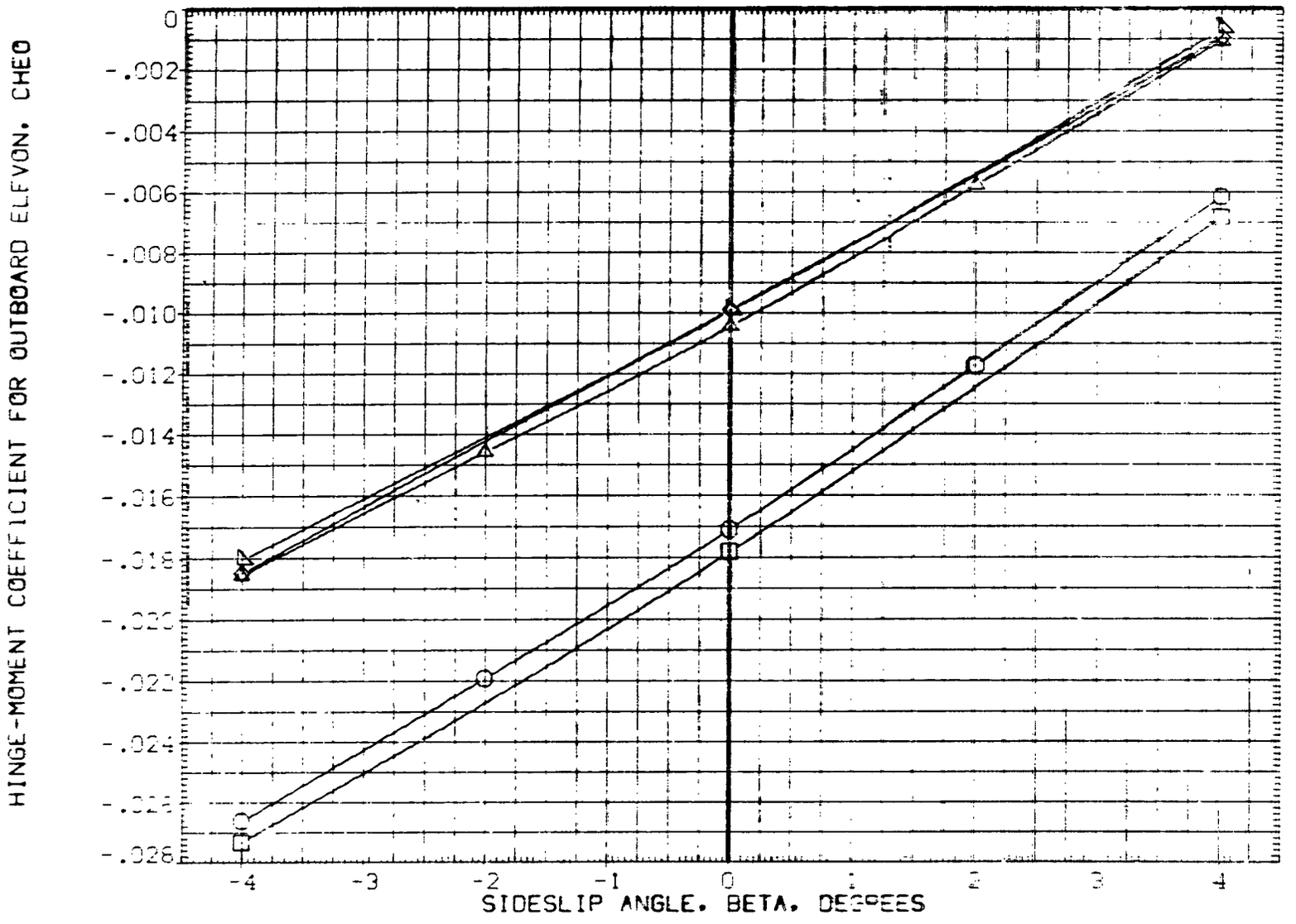


FIG.50 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN YAW, POWER ON, MACH = 2.0

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	ELEVON	MACH	PT.	REFERENCE INFORMATION	
(RE6Y44)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	2.200	80,000	SREF 1680.00000	SQ.FT.
(RE6Y54)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	.000	2.200	80,000	SREF 1680.00000	SQ.FT.
(RE6Y72)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	2.200	80,000	SREF 1680.00000	SQ.FT.
(RE6Y66)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	2.200	80,000	XMRP 1776.00000	IN. XT
(RE6Y60)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	2.200	80,000	YMRP 0.00000	IN. YT
								ZMRP 400.00000	IN. ZT
								SCALE 1.00000	

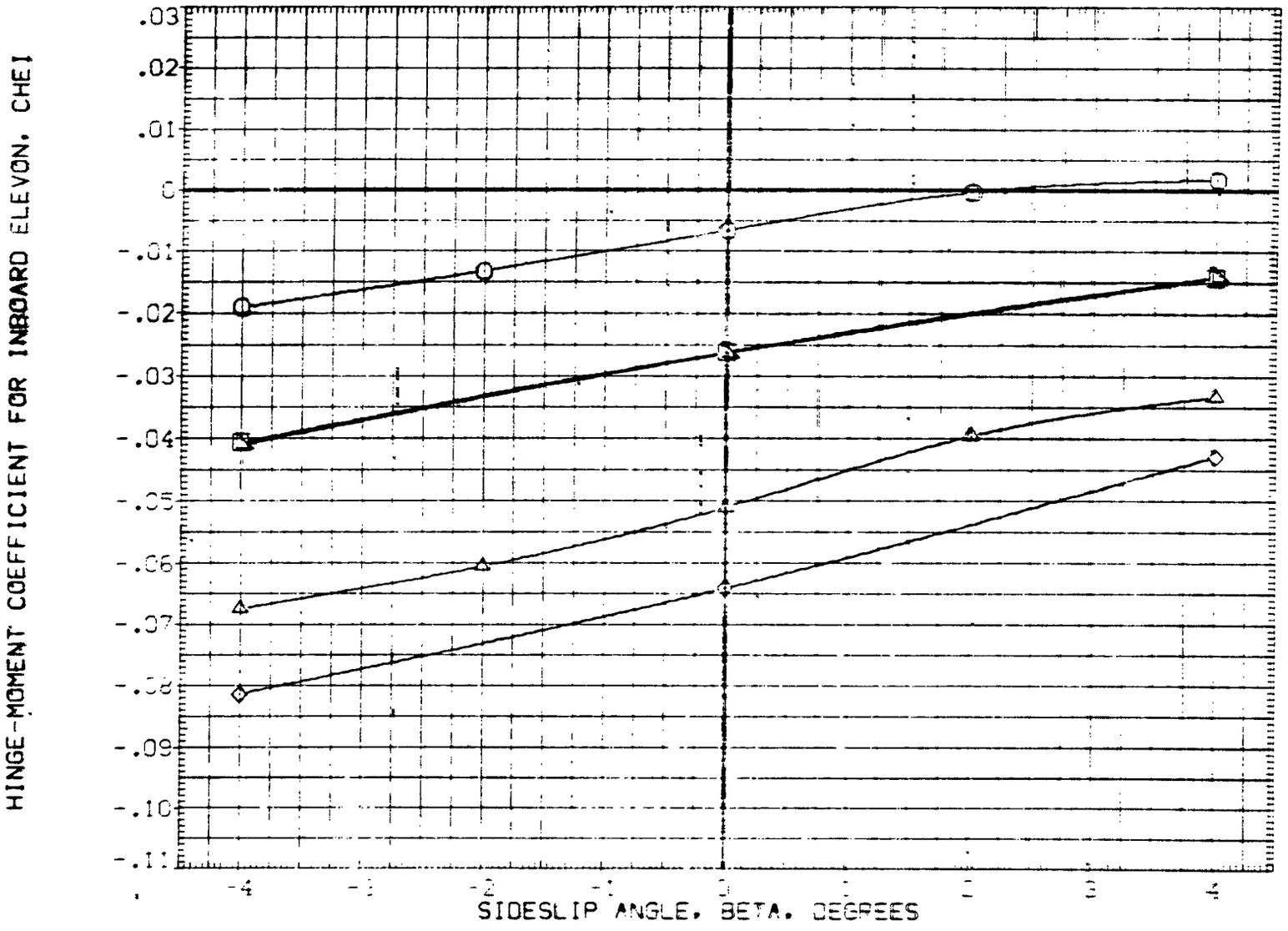


FIG.51 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN PWR. POWER ON, MACH = 2.2

CA(ALPHA = .00

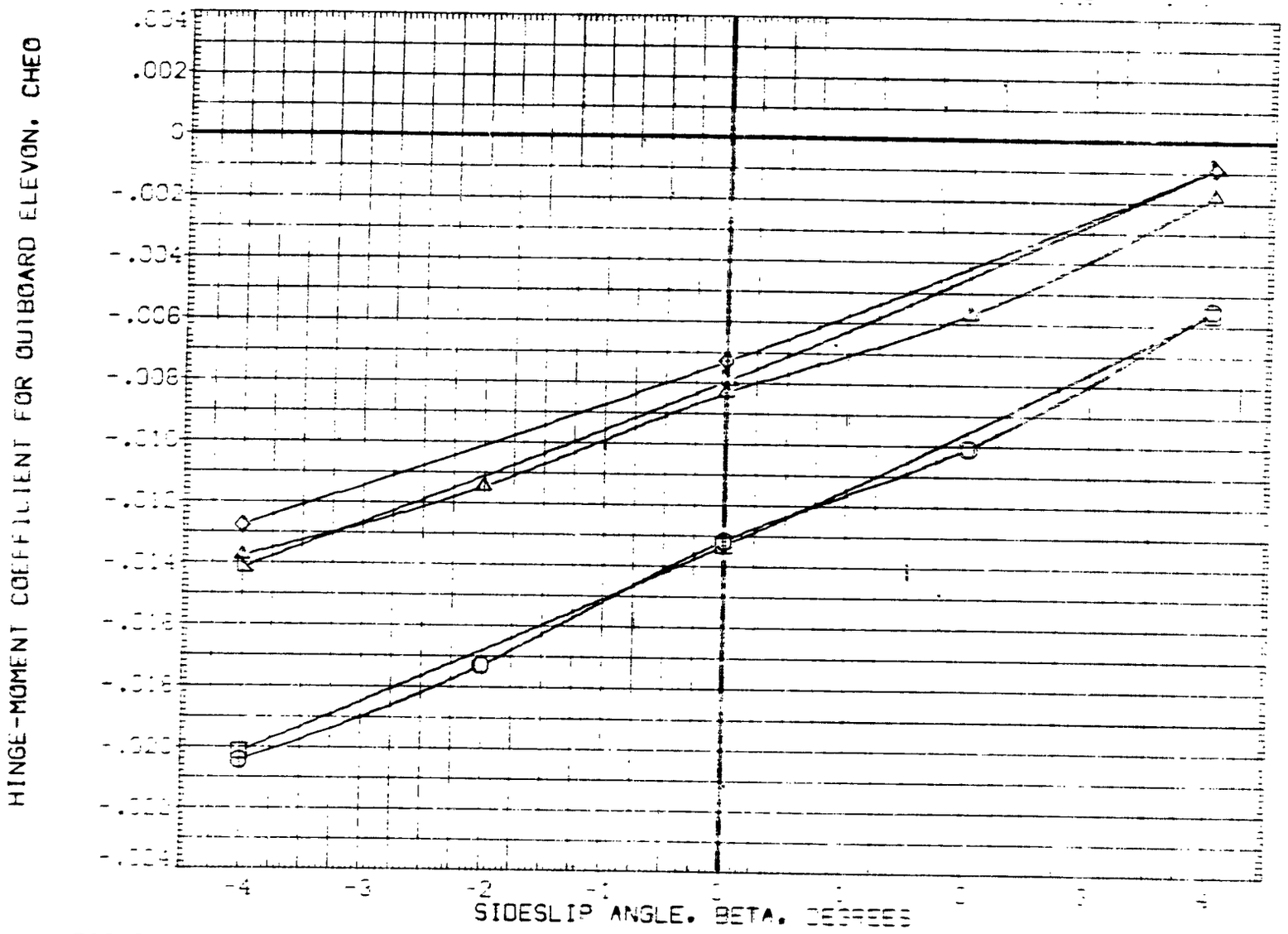


FIG.51 ELEVON DEFLECTIONS EFFECT ON ELEVON H.M. IN [illegible]

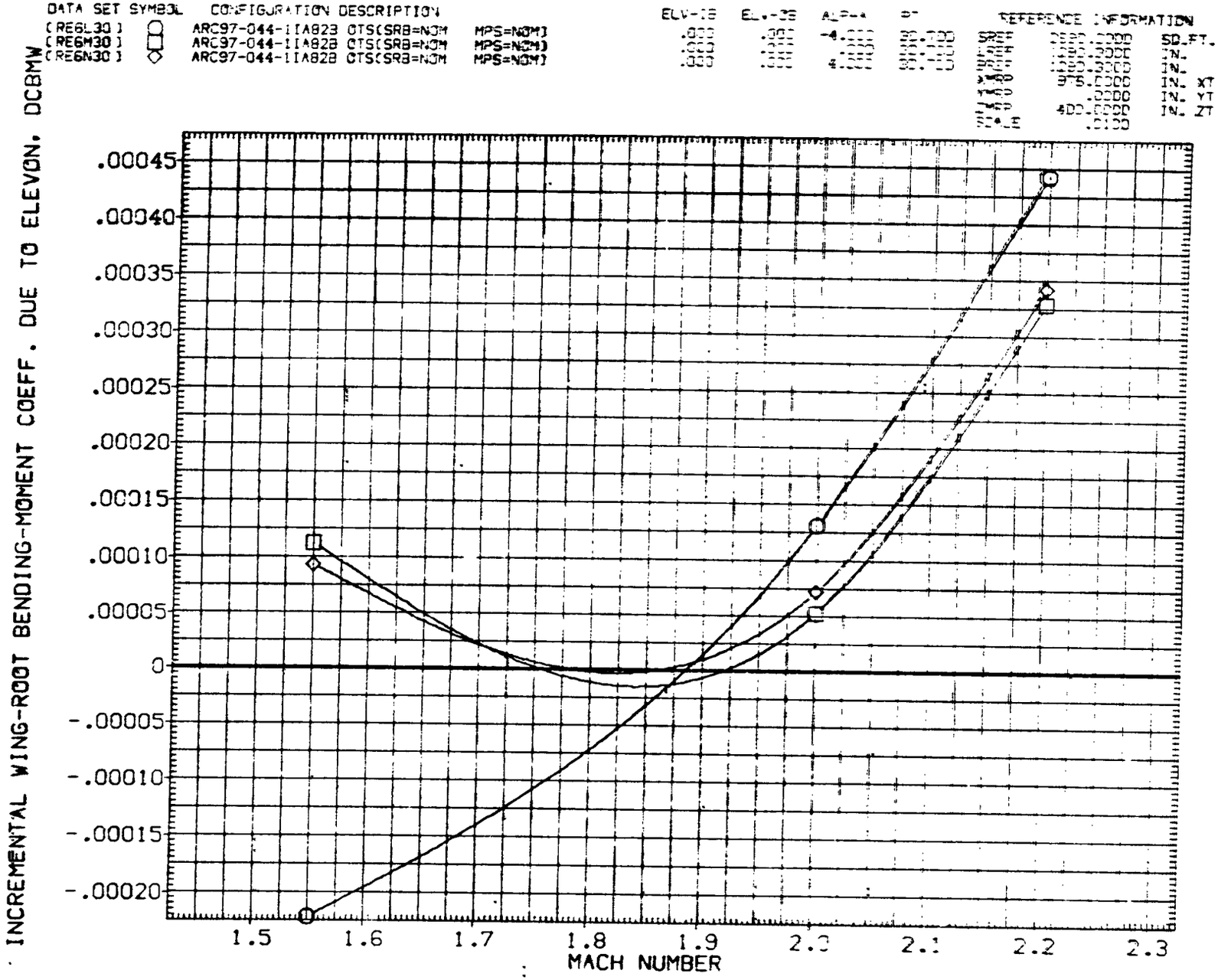


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(A)BETA = .00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	ALPHA	PT
(REGL30)	□	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	-4.000	30.700
(REGM30)	◇	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700
(REGN30)	◇	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	4.000	30.700

REFERENCE INFORMATION

SREF	[illegible]	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN. X
YMRP	[illegible]	IN. Y
ZMRP	[illegible]	IN. Z
SCALE	0.00	

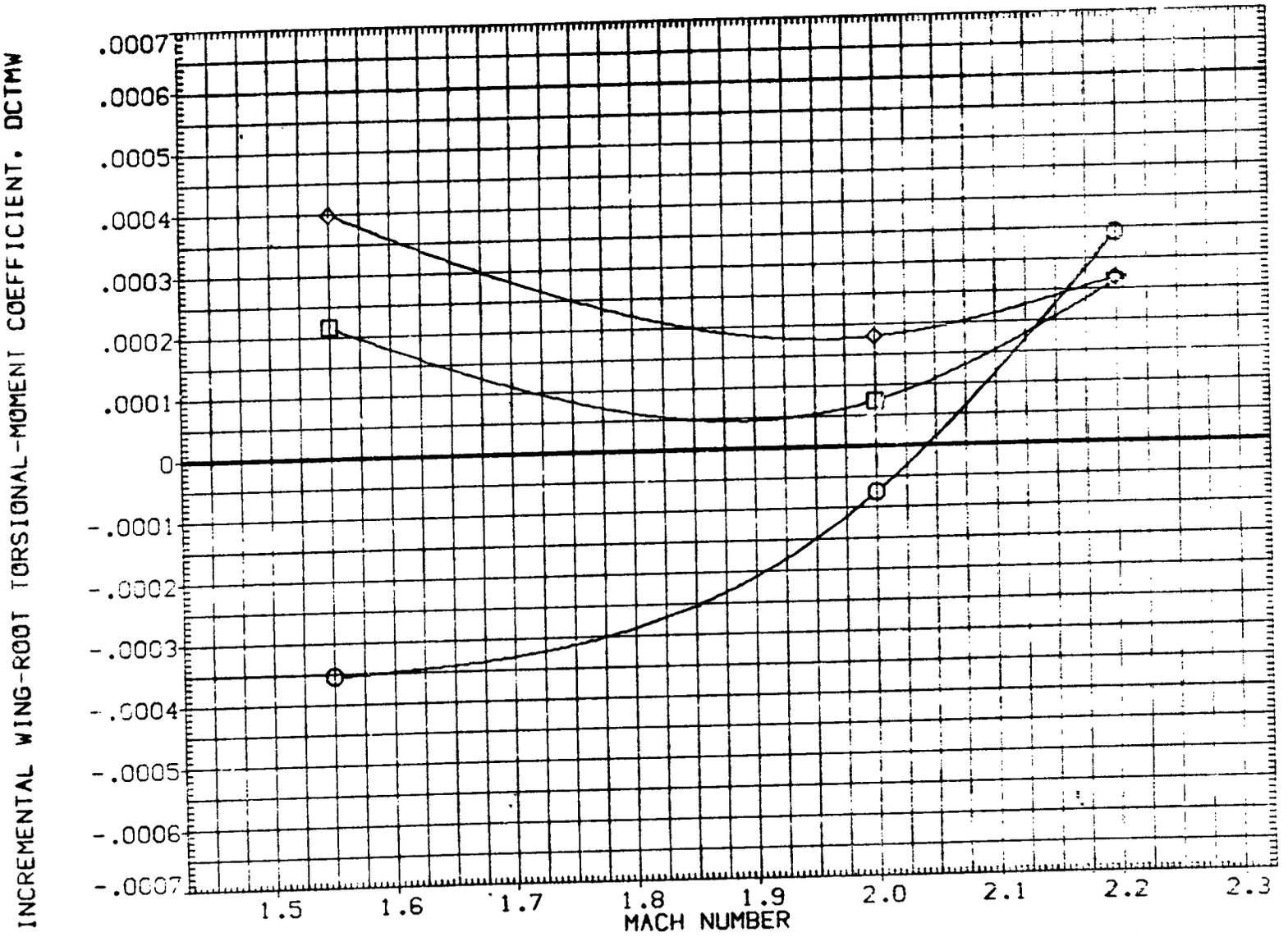


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	ALPHA	PT
(RE6L30)	□	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	-4.000	30.700
(RE6M30)	◇	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700
(RE6N30)	◇	ARC97-044-1IA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	4.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

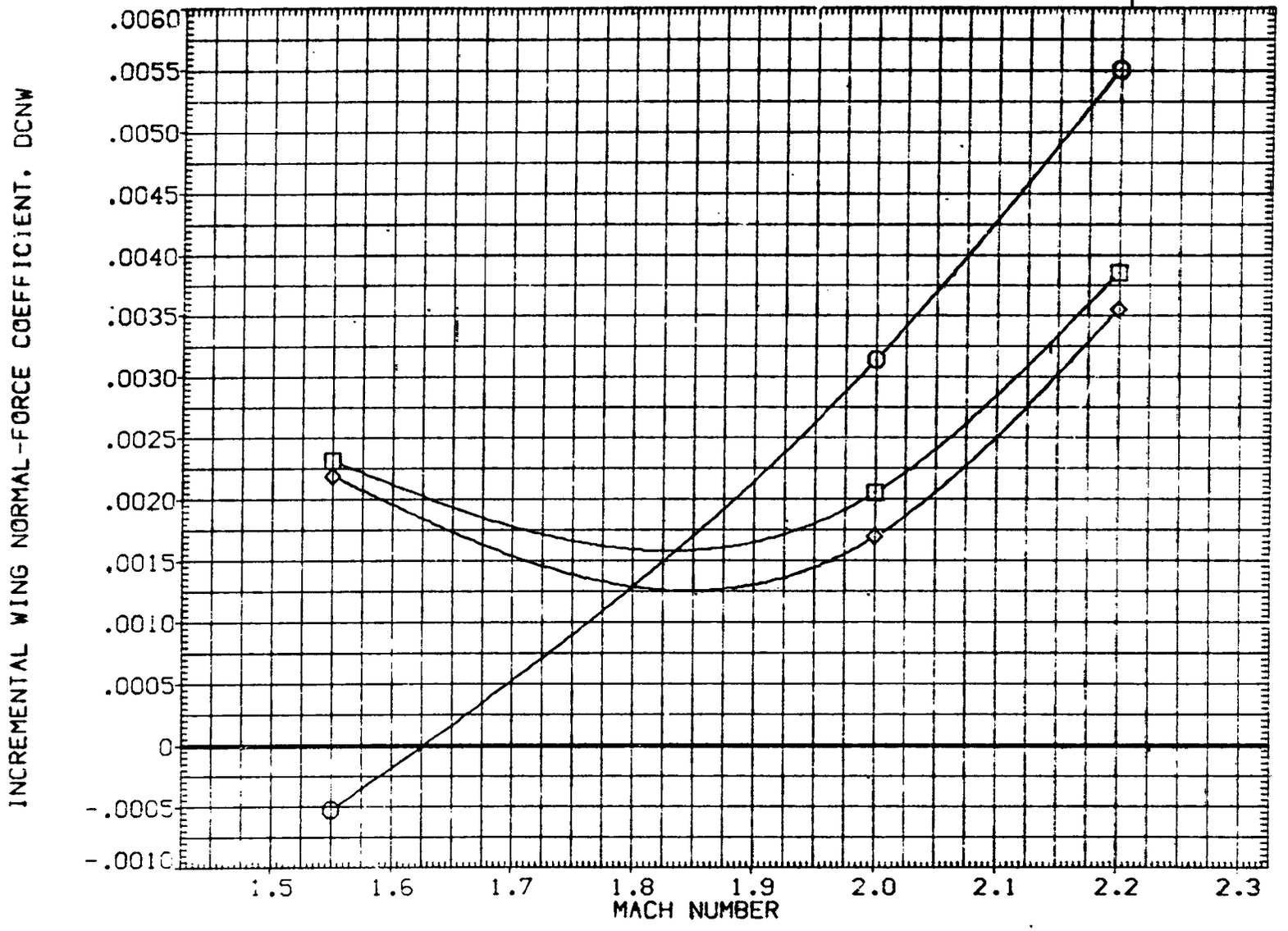


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(A)BETA = .00

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(illegible)	1PC8T-C44-111A82B OTS(SRB=NOM	MPS=NOM)
(illegible)	1PC8T-C44-111A82B OTS(SRB=NOM	MPS=NOM)
(illegible)	1PC8T-C44-111A82B OTS(SRB=NOM	MPS=NOM)

ELV-IB	ELV-OB	ALPHA	BT
.000	.000	-4.000	30.700
.000	.000	.000	30.700
.000	.000	4.000	30.700

REFERENCE INFORMATION

SREF	2290.0000	SQ. FT.
LREF	1289.3000	IN.
BREF	1289.1100	IN.
XMRP	976.0000	IN. FT
YMRP	.0000	IN. FT
ZMRP	400.0000	IN. FT
SCALE	.0100	

INCREMENTAL WING CENTER-OF PRESSURE LONGITUDINAL LOCATION, DXWCP

.040
.035
.030
.025
.020
.015
.010
.005
0
-.005
-.010
-.015
-.020
-.025
-.030

1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3

MACH NUMBER

FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

CABETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	ALPHA	PT
(RE6L30)	□	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	-4.000	30.700
(RL6M30)	○	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700
(RE6M30)	◇	ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	4.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

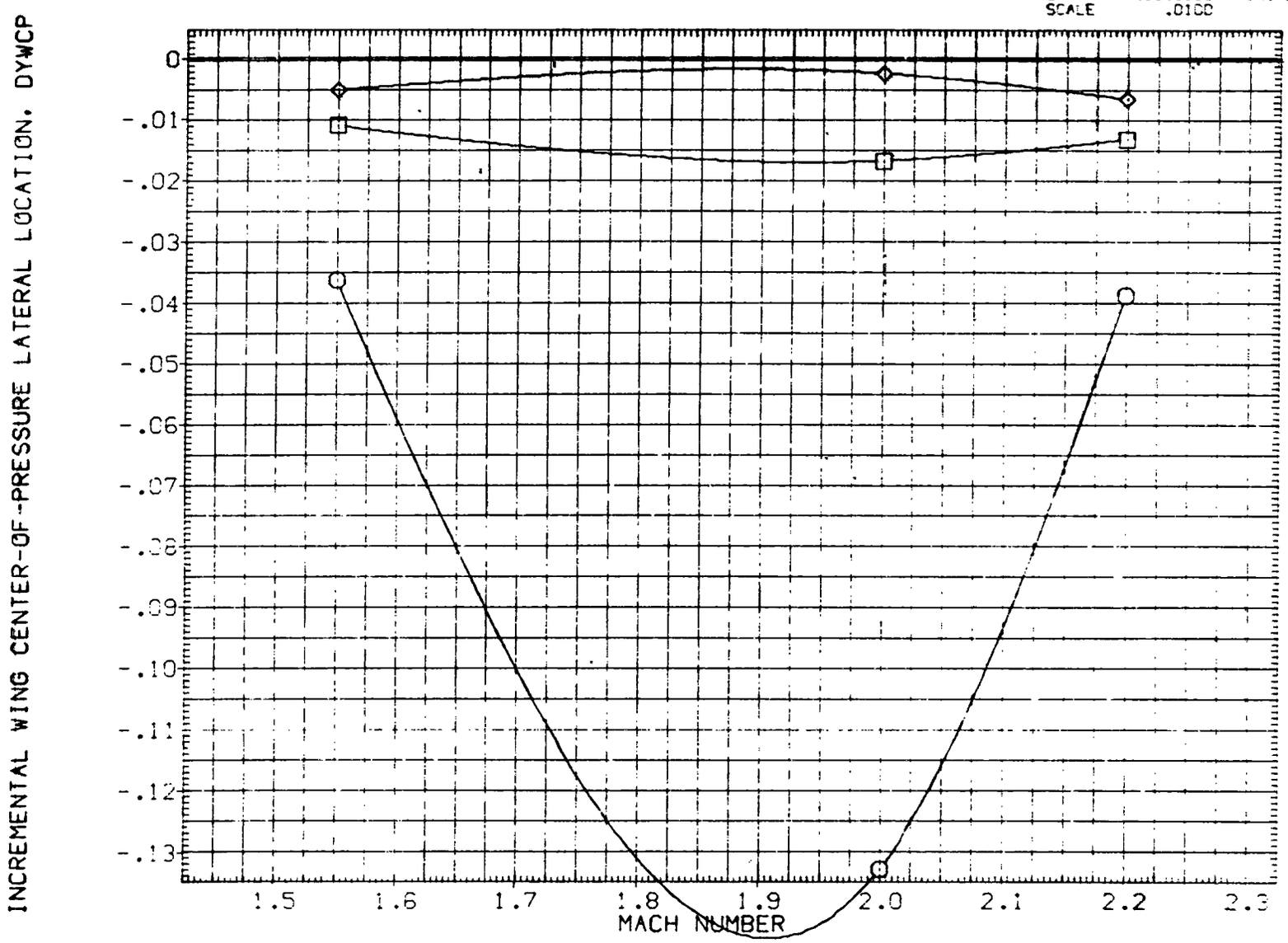


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(A)BETA = .00

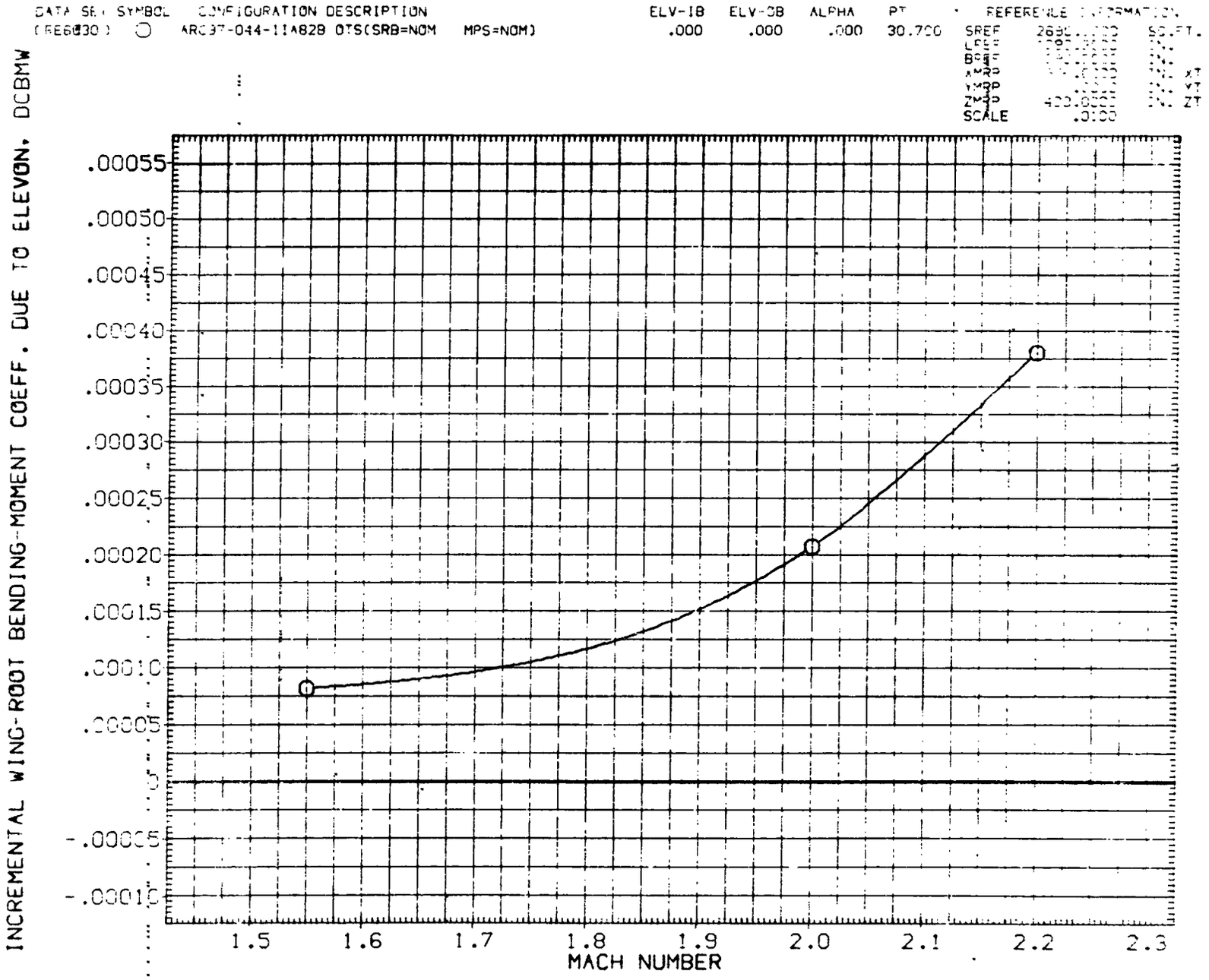


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(A)BETA = -4.00

CONFIGURATION DESCRIPTION
ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)

ELV-IB	ELV-OB	ALPHA	PT
.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1293.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMPP	400.0000	IN. ZT
SCALE	.0100	

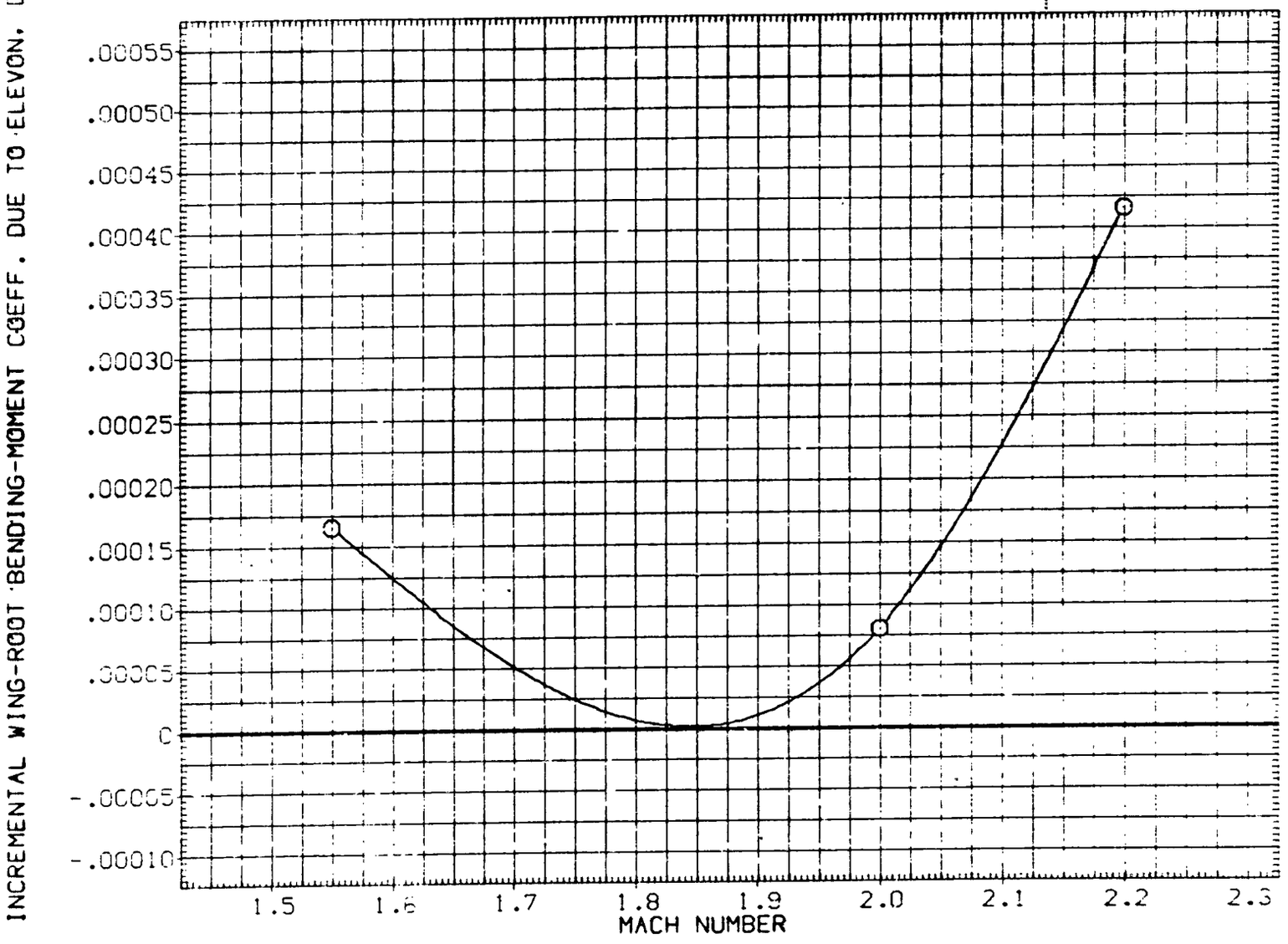


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(B)BETA = -2.00

CONFIGURATION DESCRIPTION
AP037-044-11/82B DTS(SPB=NOM MPS=NOM)

ELV-IB	ELV-OB	ALPHA	PT
.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2880.0000	SQ. FT.
LREF	1320.0000	IN.
BREF	1320.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

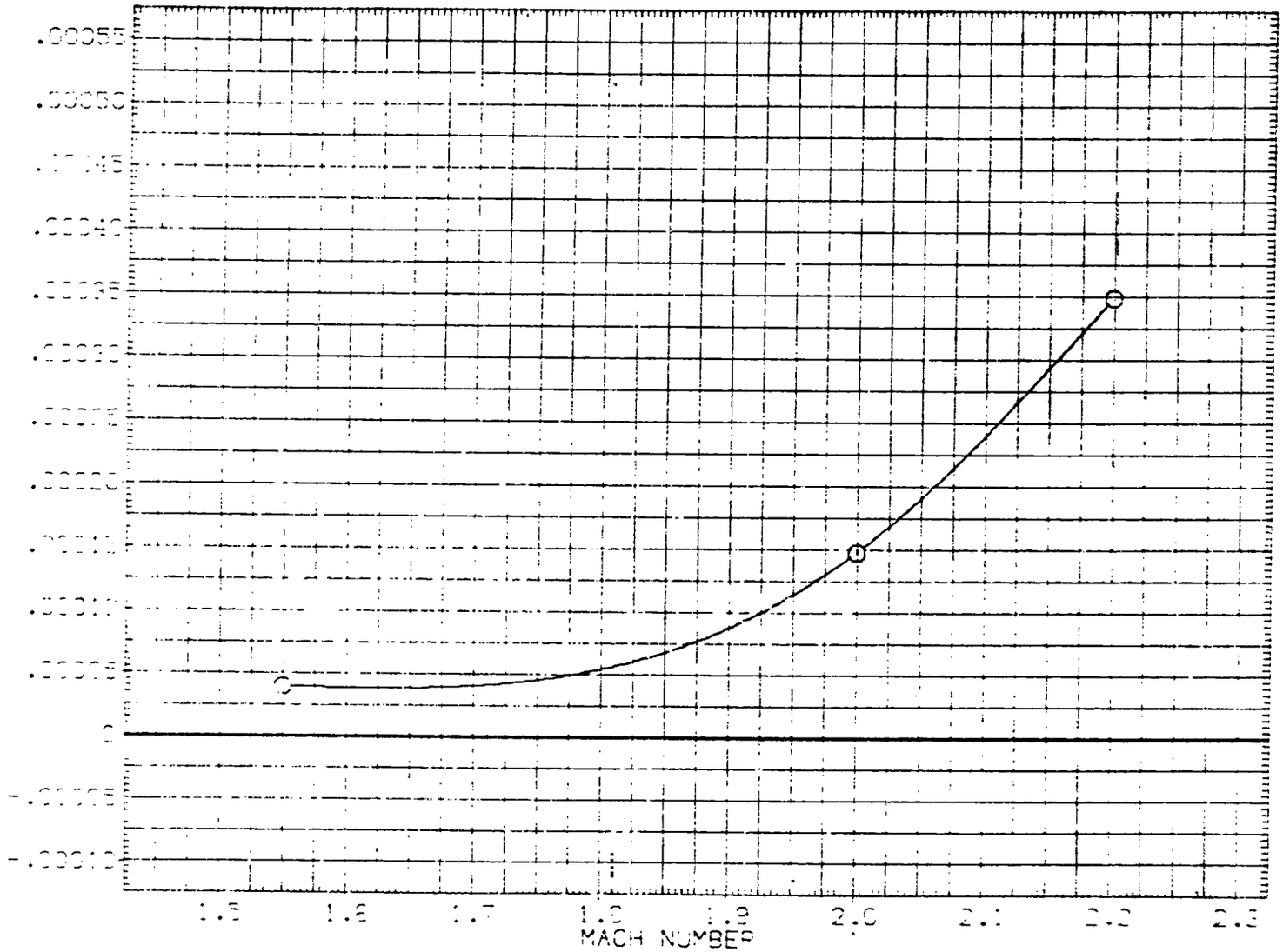


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

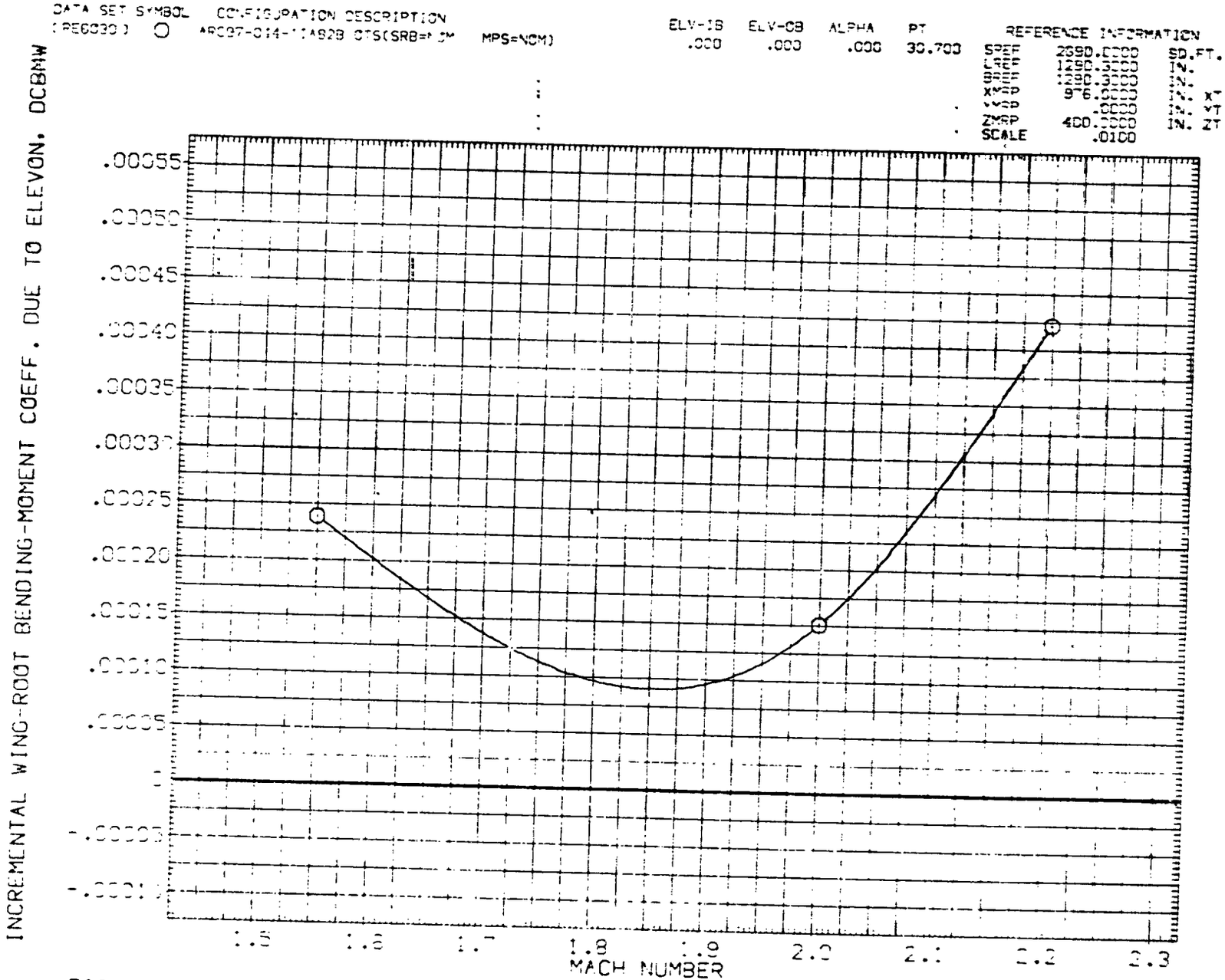


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

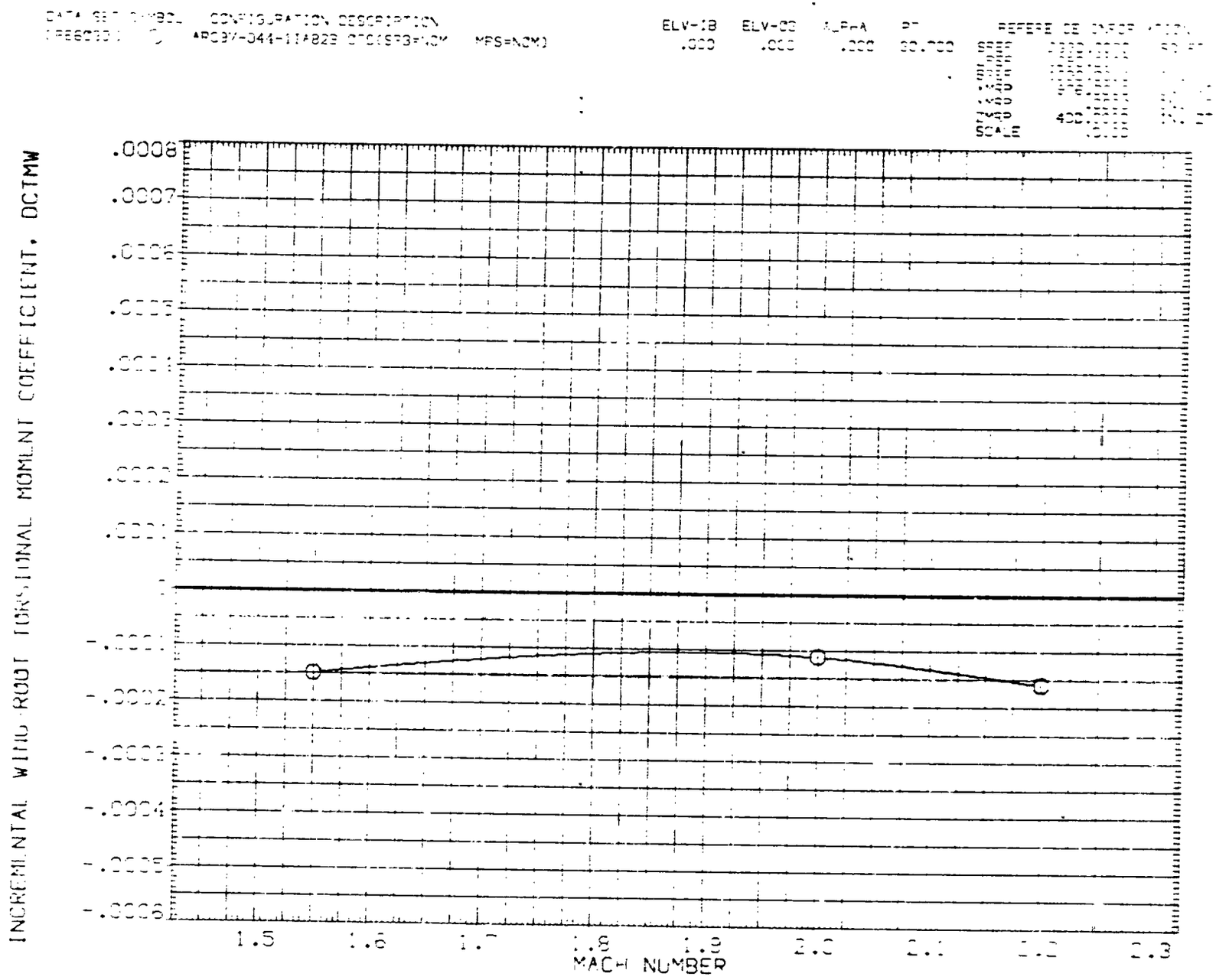


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, EL.-IB = EL.-OB = 0

CADBETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(PE6030)	○	ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

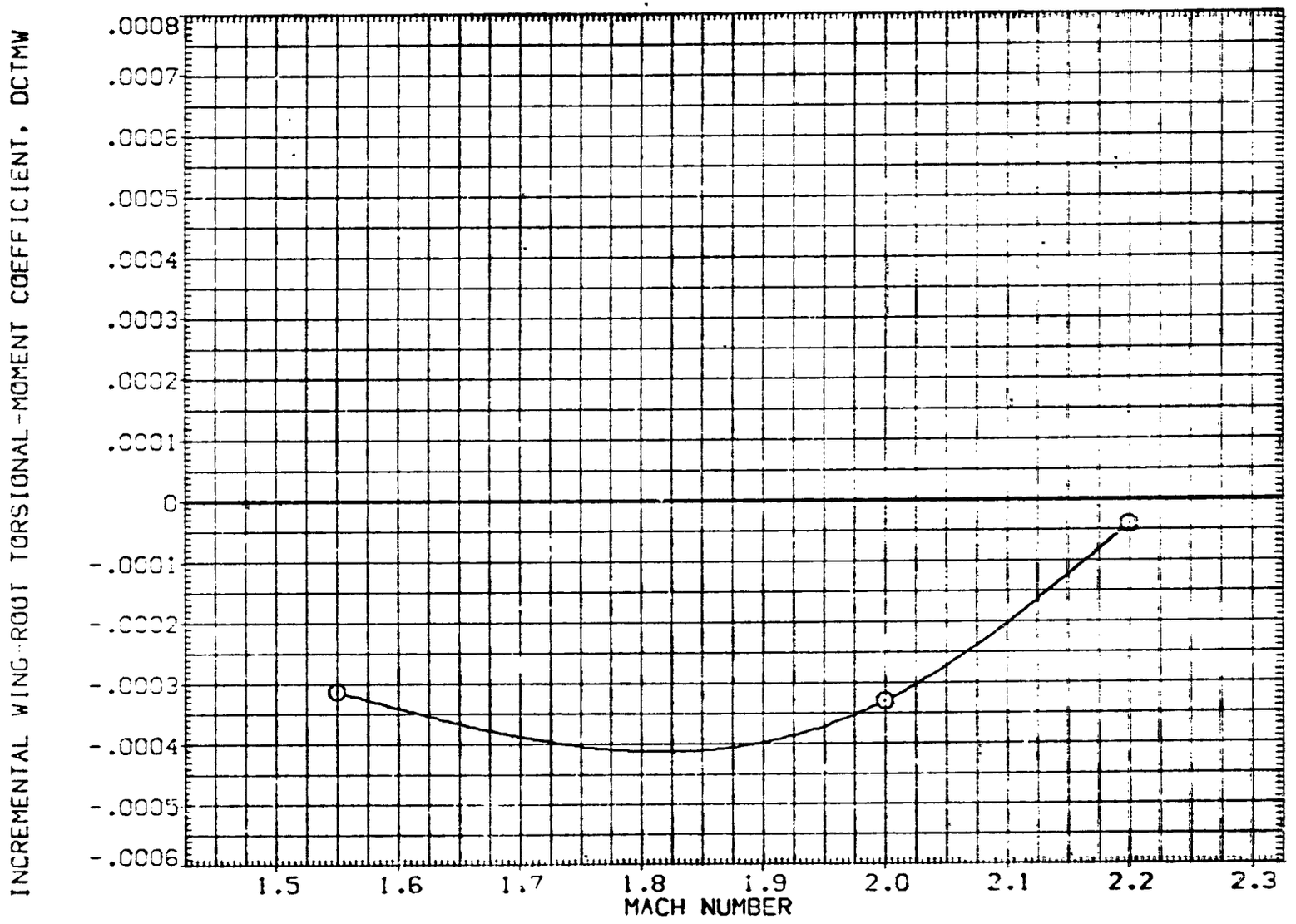


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(B)BETA = -2.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(956030) □ AR097-044-111828 OTS:RFB=NOM MPS=NOM)

ELV-IB	ELV-OB	ALPHA	PT
.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1480.0000	IN.
BREF	1980.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	430.0000	IN. ZT
SCALE	.0100	

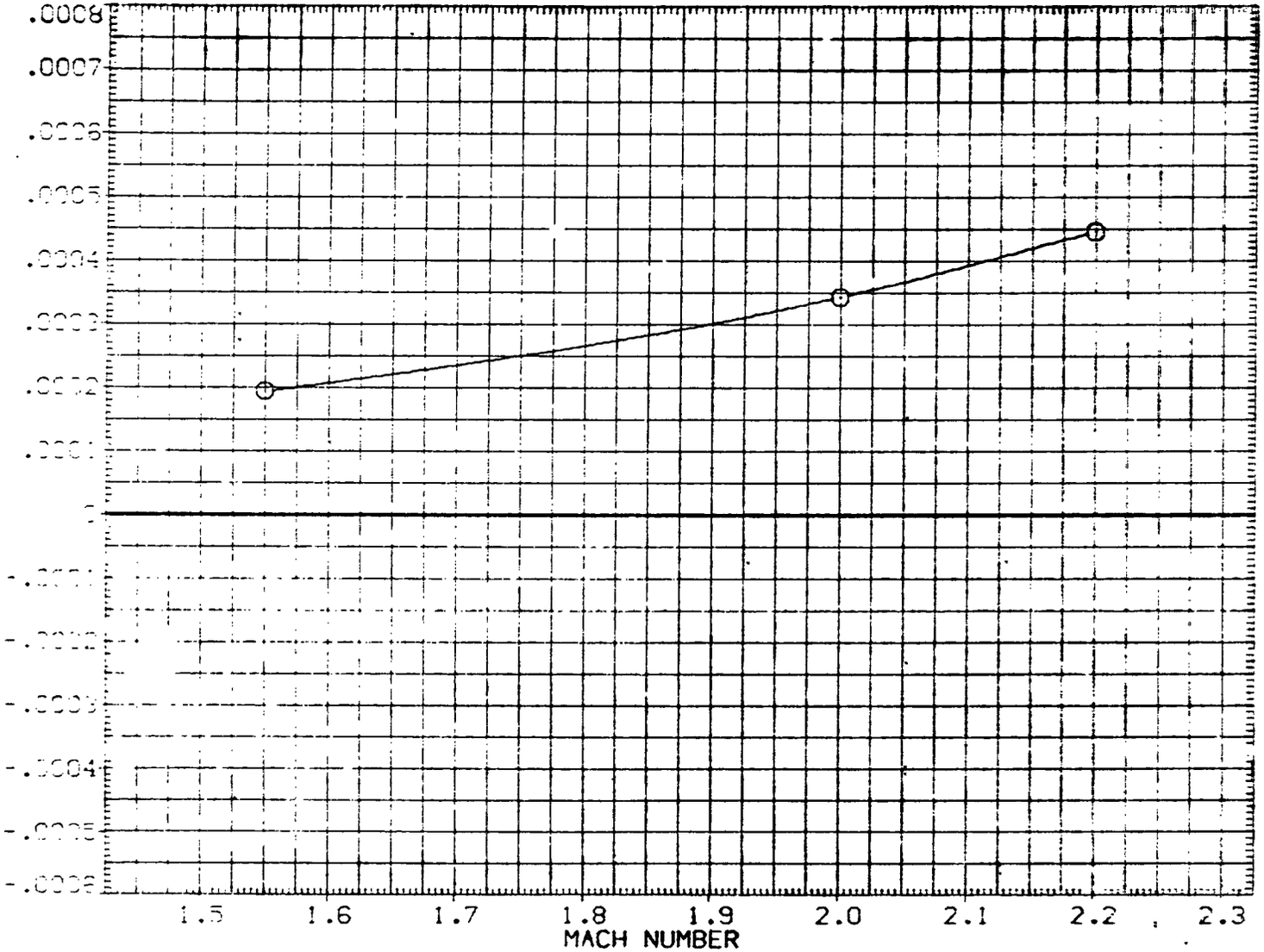


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(BETA = 2.00)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(DB3030	AR38T-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

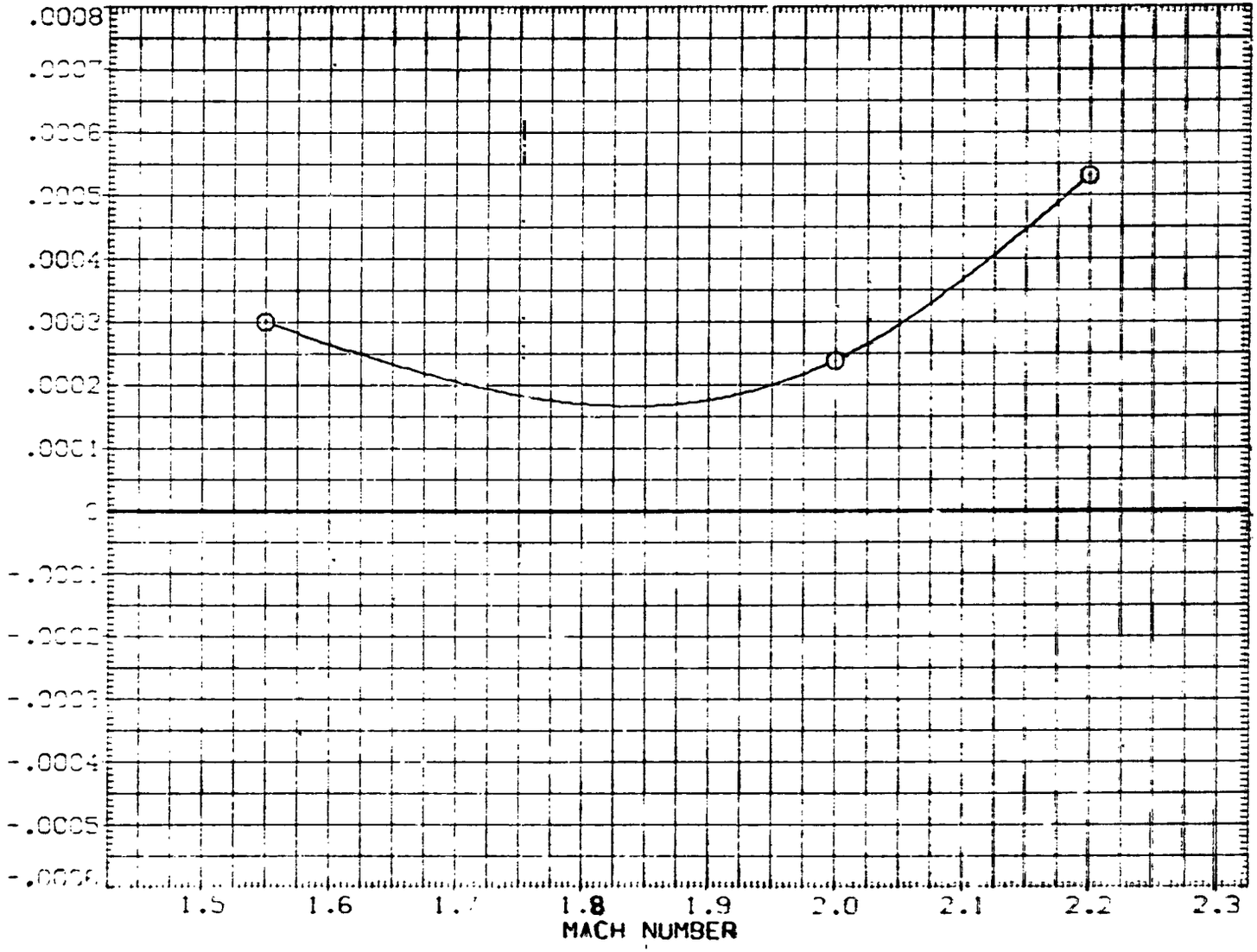


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(D)BETA = 4.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(PB6030) ○ AP087-044-11A82B OTS(SRB=NOM MPS=NOM)

ELV-IB ELV-OB ALPHA MACH REFERENCE INFORMATION
.000 .000 .000 00.700 SREF [illegible] SQ.FT.
[illegible]
[illegible]
[illegible]

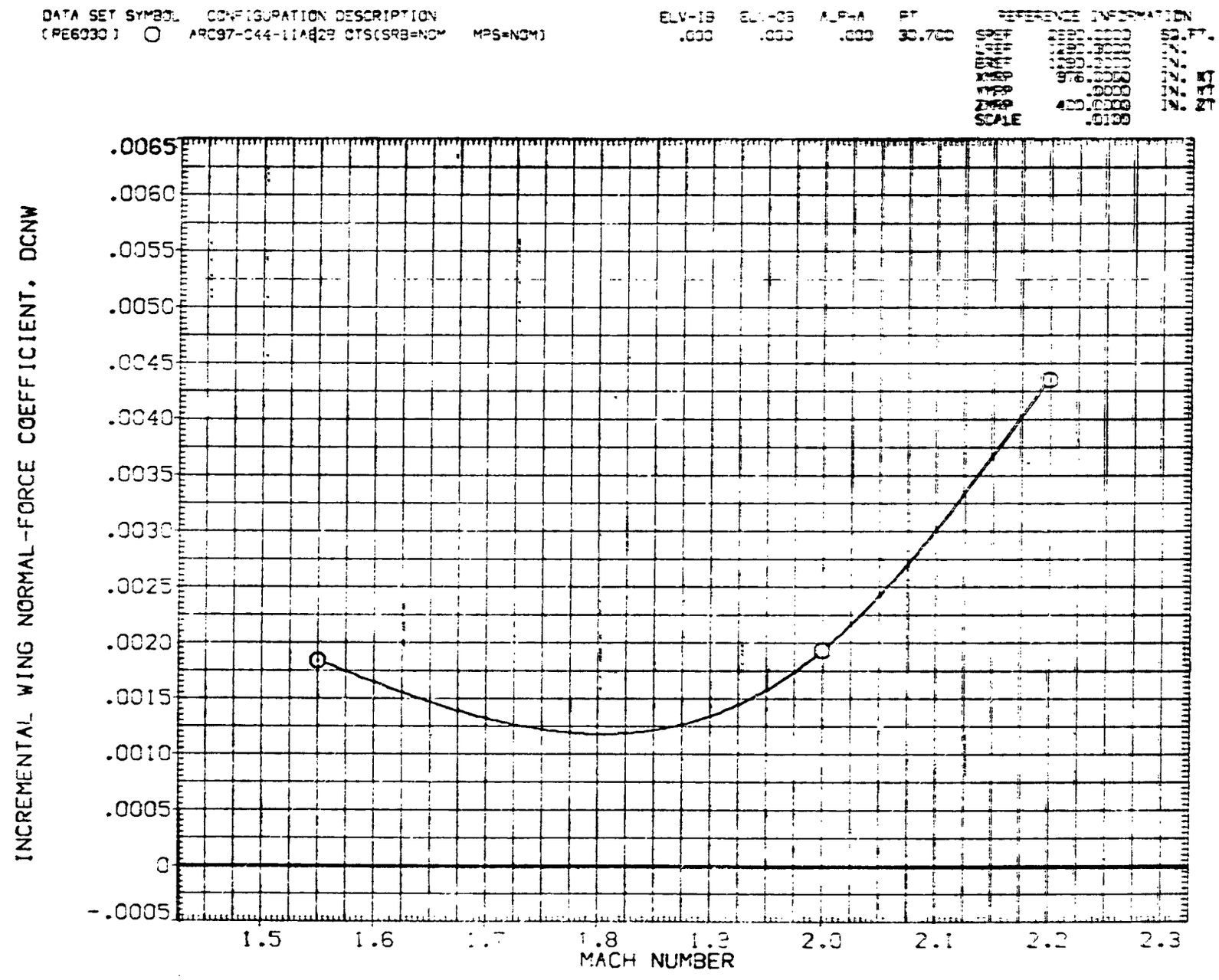


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(B)BETA = -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE6030) ○	RC97-044-11A828 BTS(SPB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1180.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

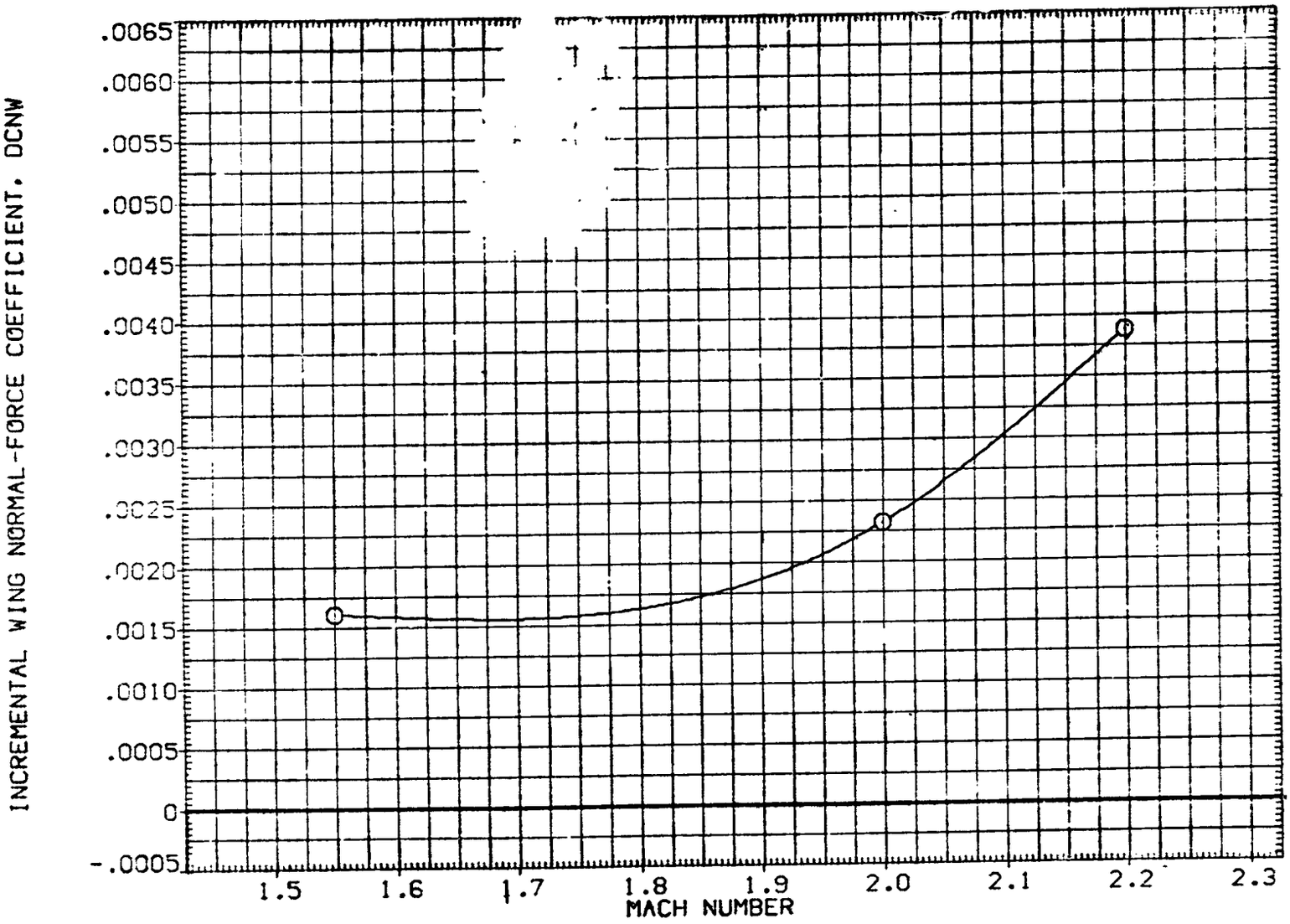


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(C)BETA = 2.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RE6030) ○ ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)

ELV-IB	ELV-OB	ALPHA	PT
.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

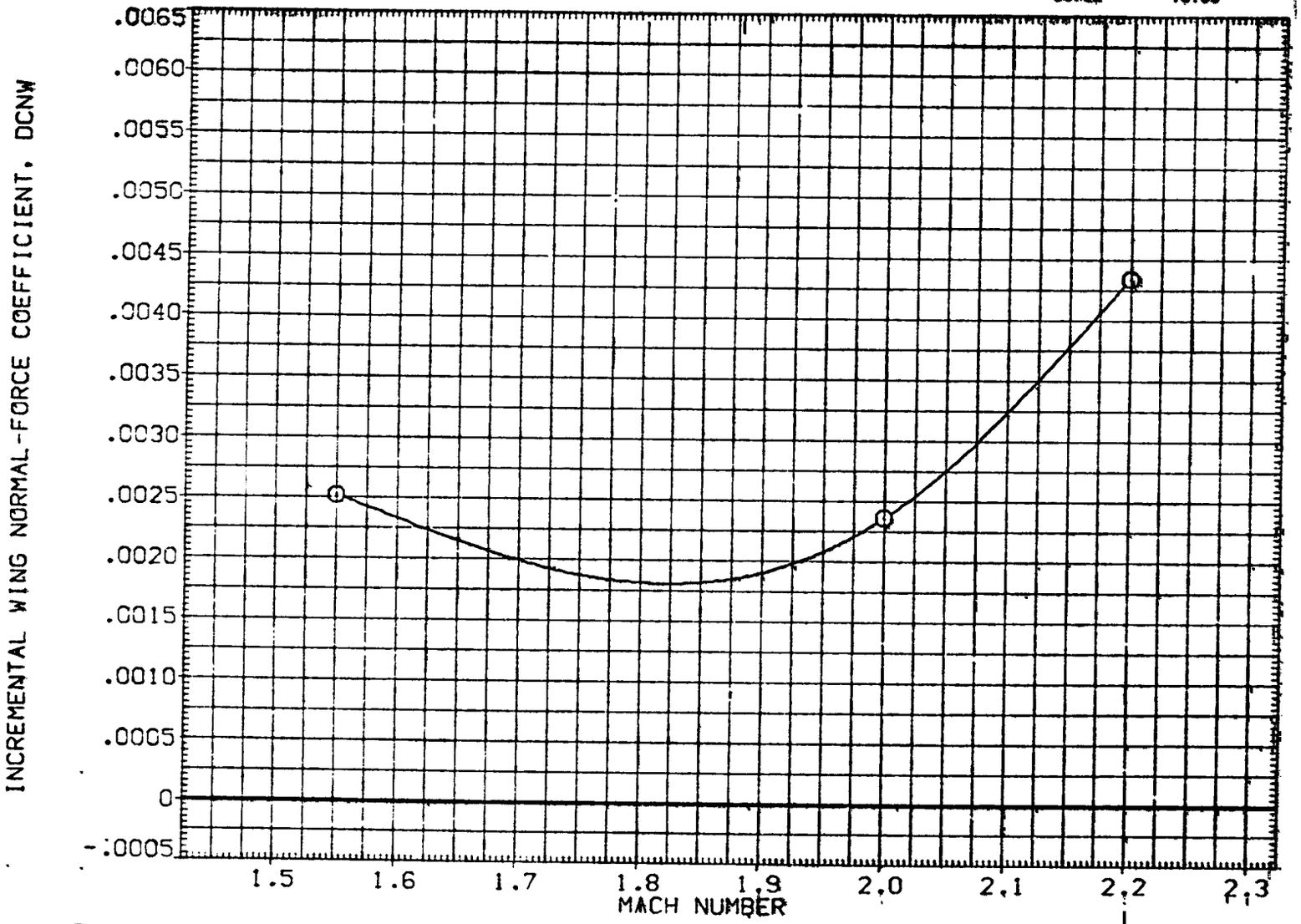


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(D)RLTA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE6030)	○	A8C87-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	



FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(A)BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(PE6030) ○	APC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

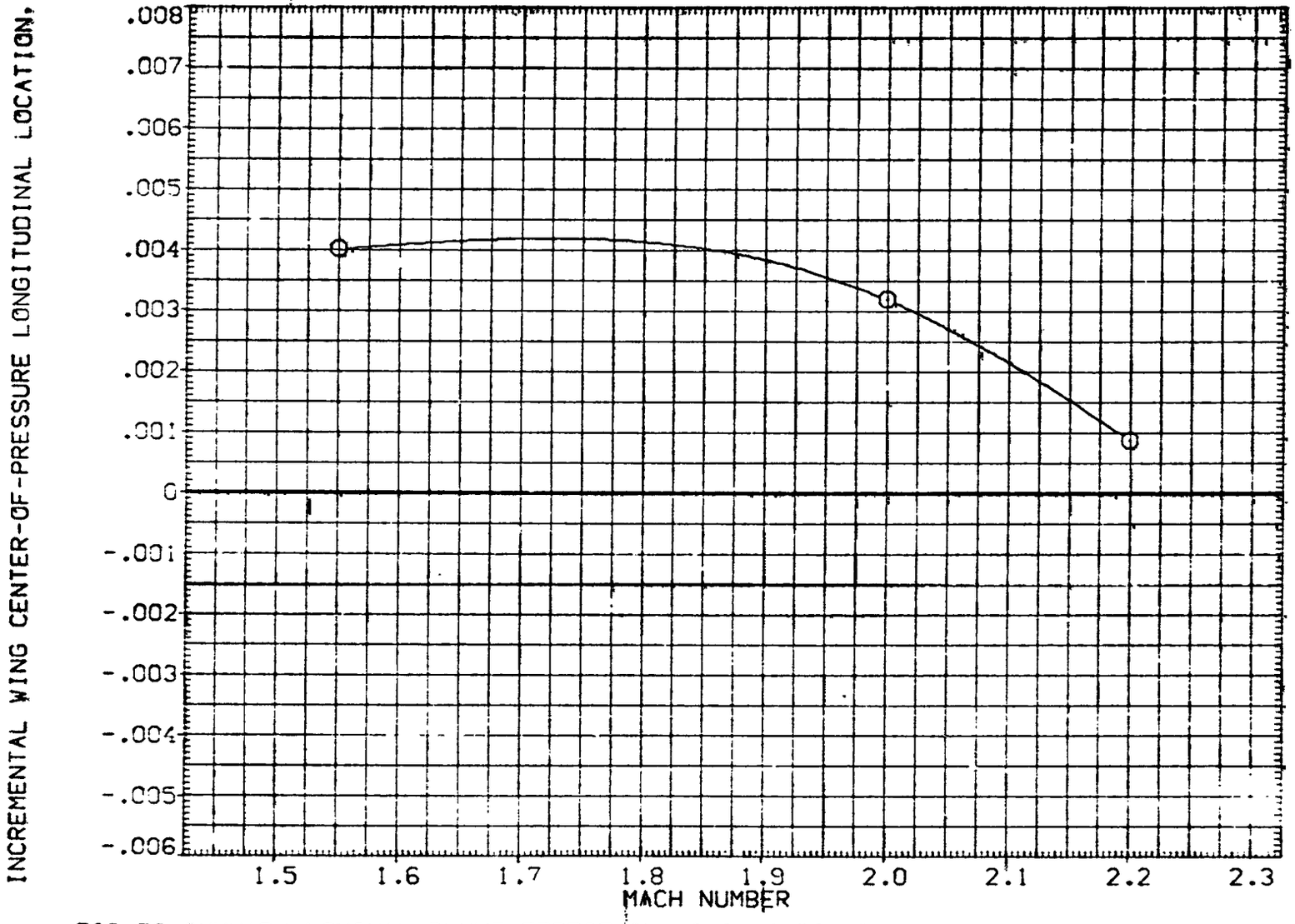


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(B)BETA = -2.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RE6030) ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)

ELV-IB	ELV-OB	ALPHA	PT
.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2680.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

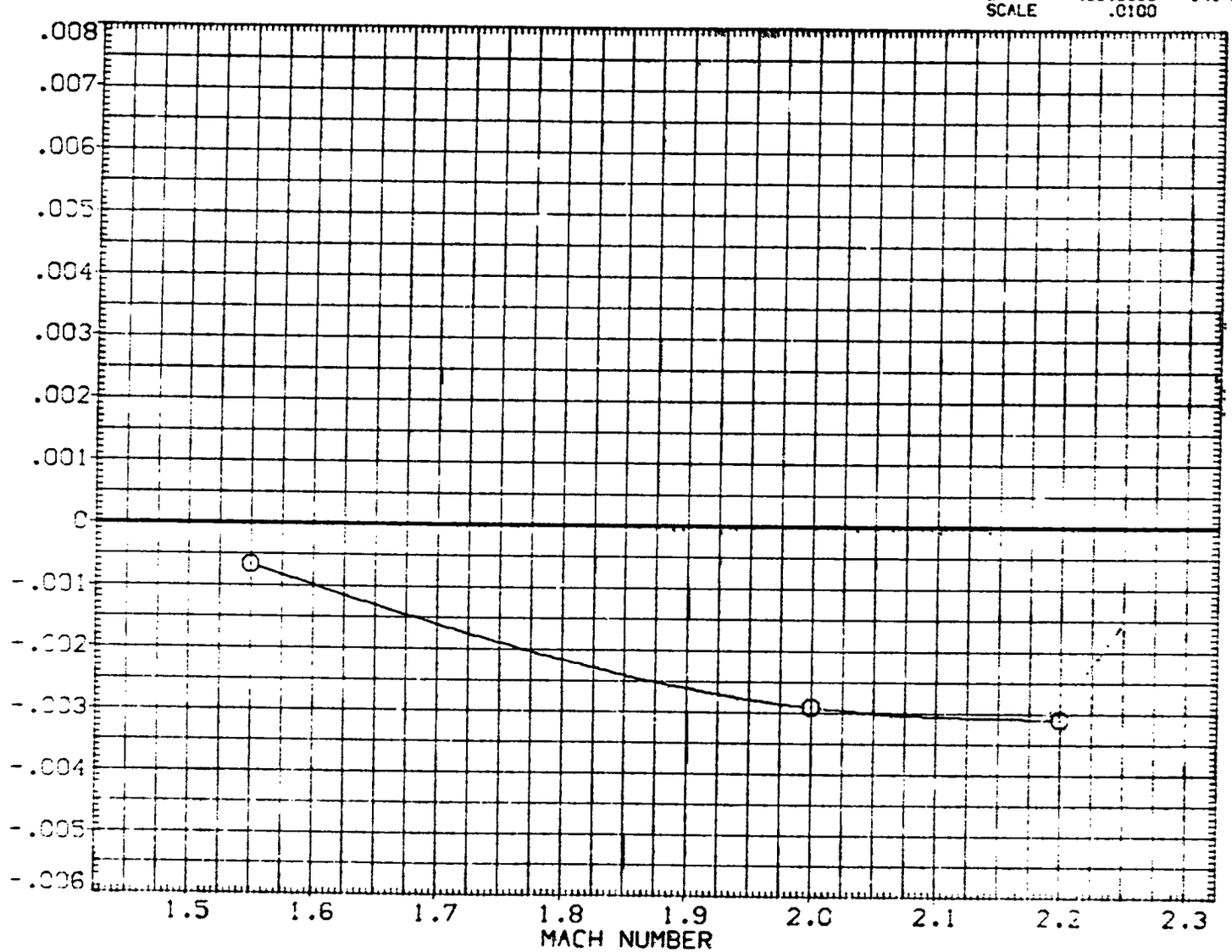


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(RE6030) IA = 2.00

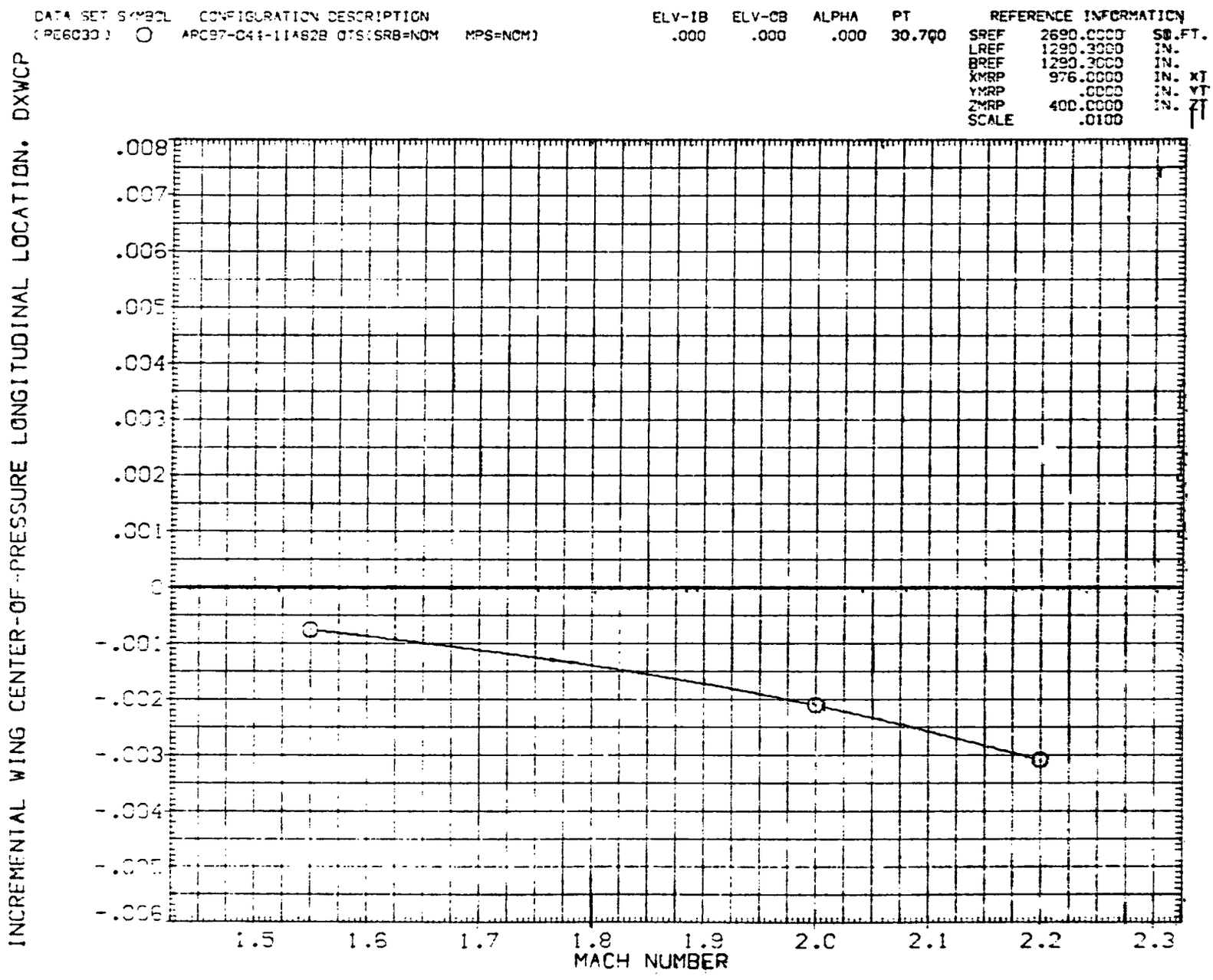


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

ALPHA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(FE6030)	SRC97-044-11A928 0.5(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1180.3000	IN.
BREF	1180.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

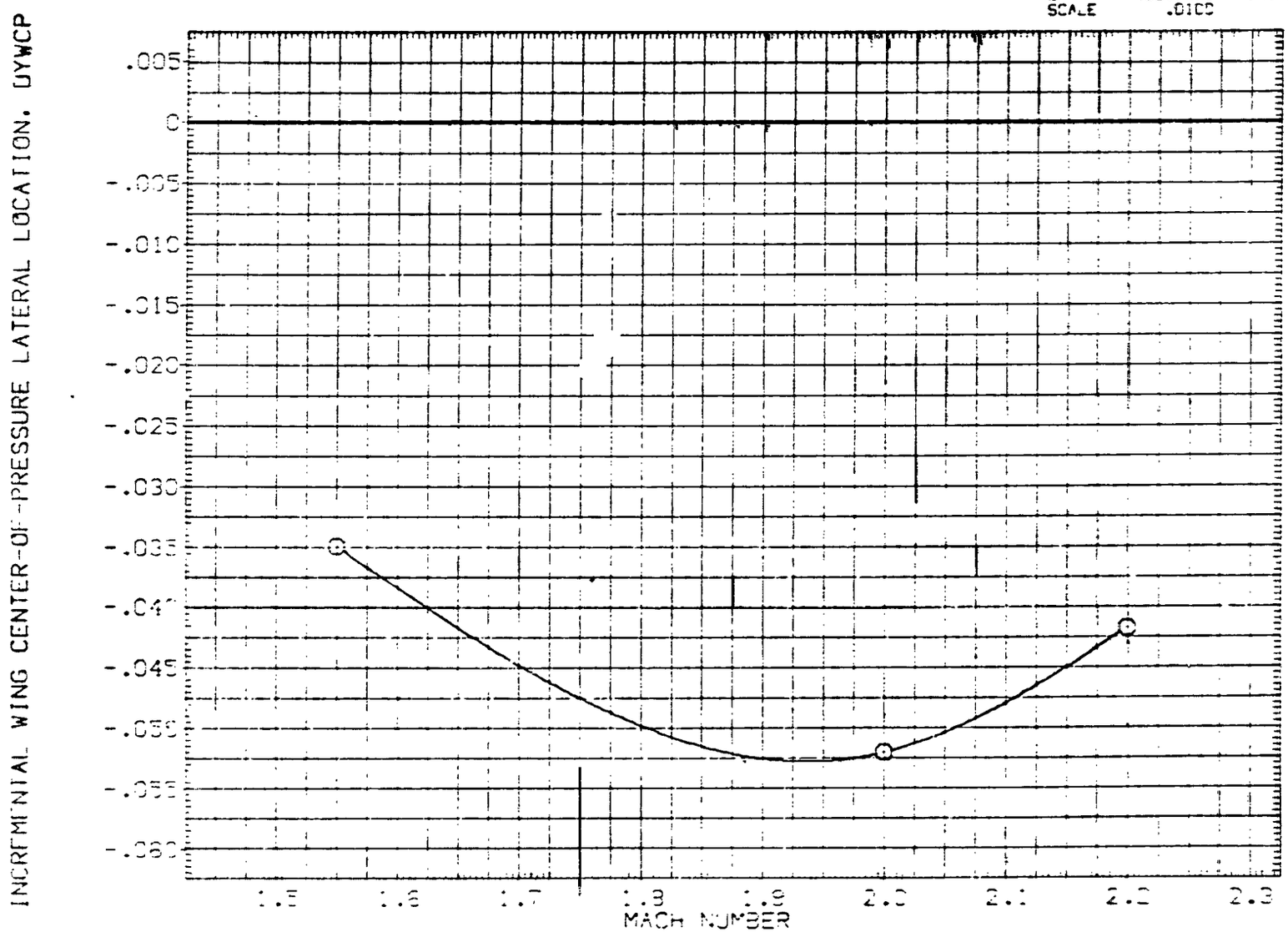


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE6030) ○	AP69T-044-[14828 OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

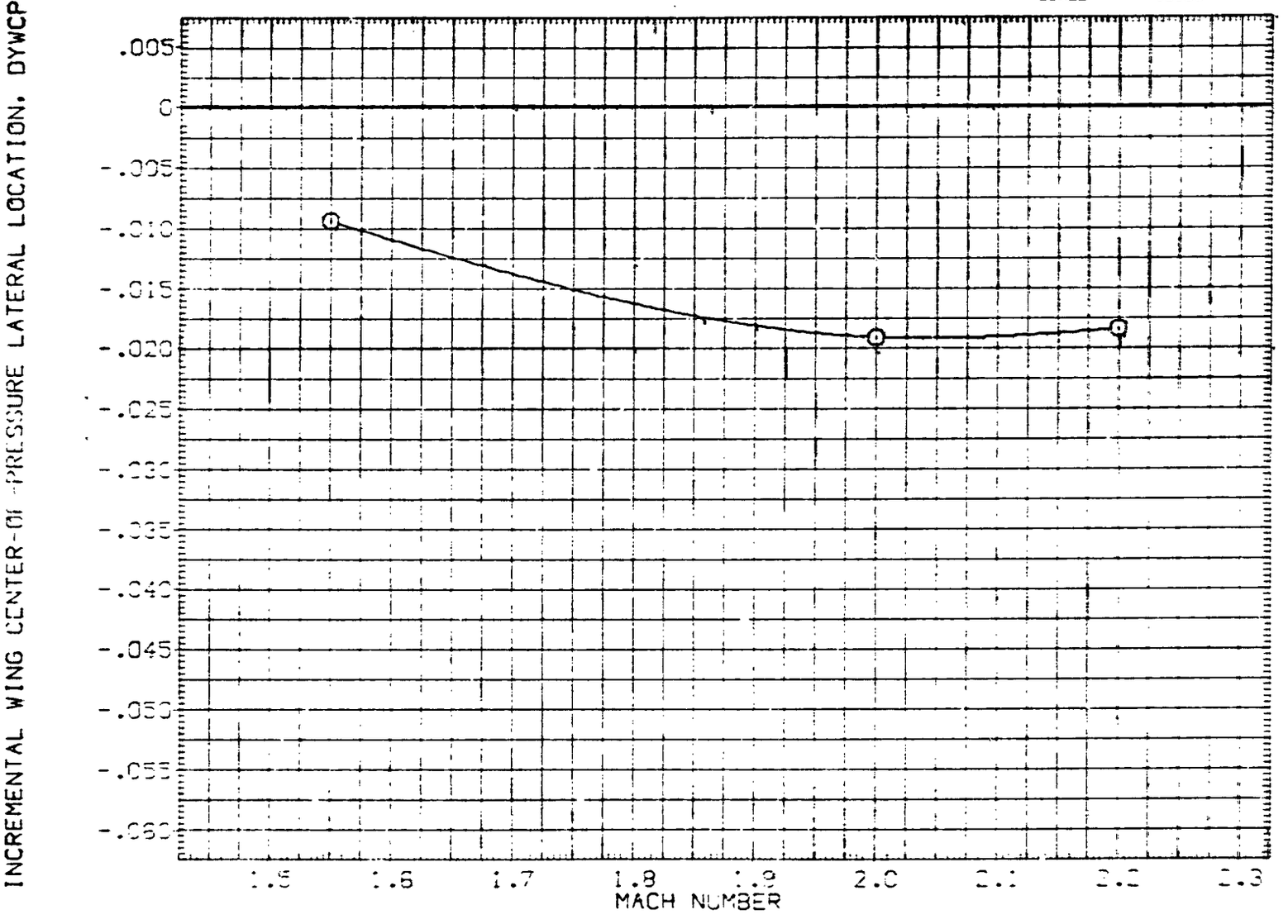


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

IB,BETA = 0.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RE6030) ○ AR037-044-11A828 OTS(SRB=NOM MPS=NOM)

ELV-IB ELV-OB ALP-A FT
.000 .000 .000 30.700

REFERENCE INFORMATION
SREF 2690.0000 SQ FT.
LREF 1161.3000 FT
BREF 1291.3000 FT
XMC 9.8[illegible] FT
YMC .0000 FT
ZMC 400.0000 FT.
SCALE .3100

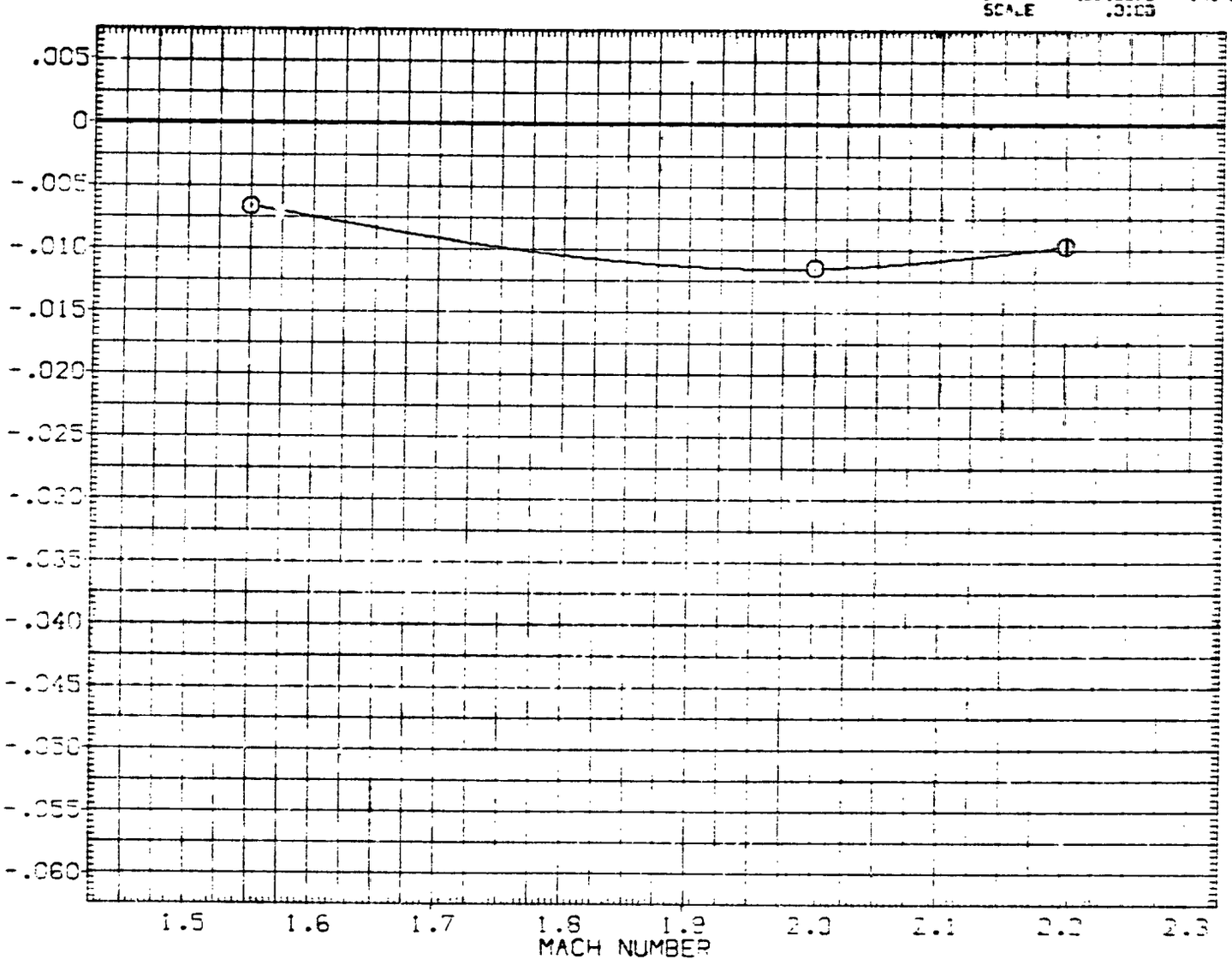


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

(DOBETA = 2.00 PAGE 192

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE8C33)	○	AP03T-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	33.703

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1160.3000	IN.
BREF	1160.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

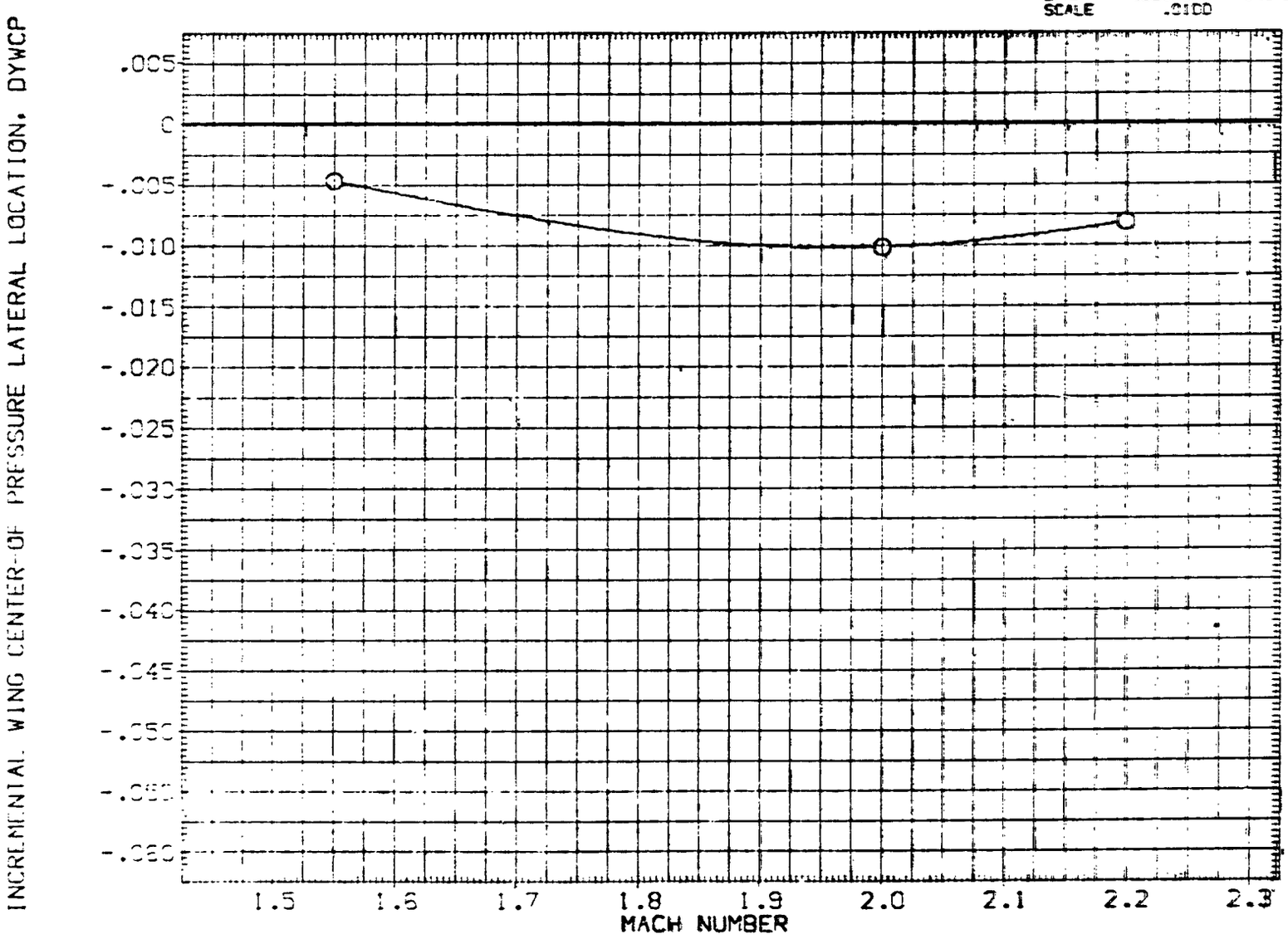


FIG.52 SUMMARY-NOMINAL PLUME EFFECT ON WING LOADS, ELV-IB = ELV-OB = 0

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
[illegible]	49097-044-11 4928 OTS(SRB=NOM MPS=NOM)	.000	.000	-4.000	30.703
[illegible]	49097-044-11 4928 OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.703
[illegible]	49097-044-11 4928 OTS(SRB=NOM MPS=NOM)	.000	.000	4.000	30.703

REFERENCE INFORMATION

SREF	[illegible]	SQ.FT.
[illegible]	[illegible]	[illegible]
BREF	[illegible]	[illegible]
XMRP	878.[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
ZMRP	400.[illegible]	[illegible]
SCALE	.0100	

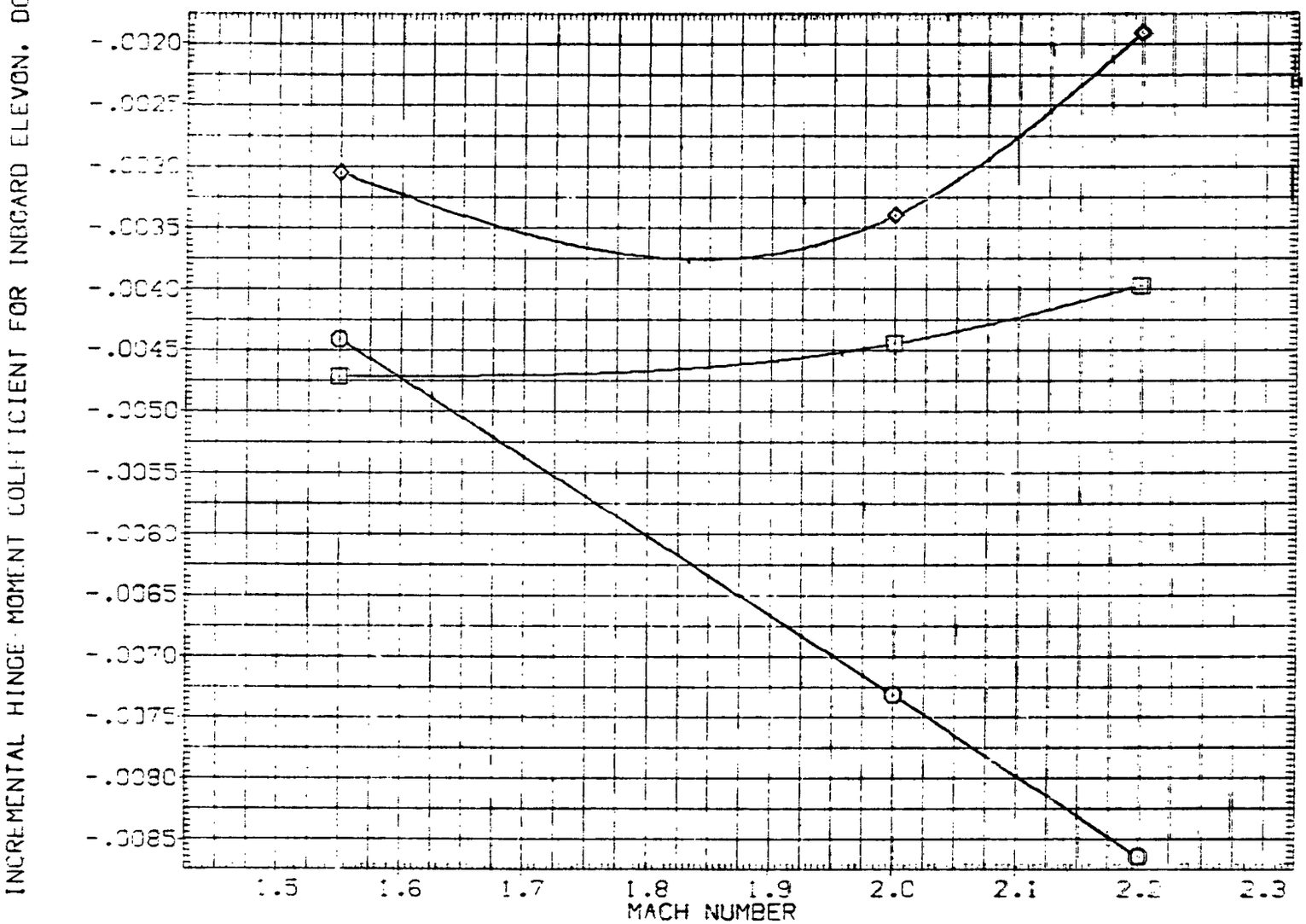


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

CA|BETA = .00

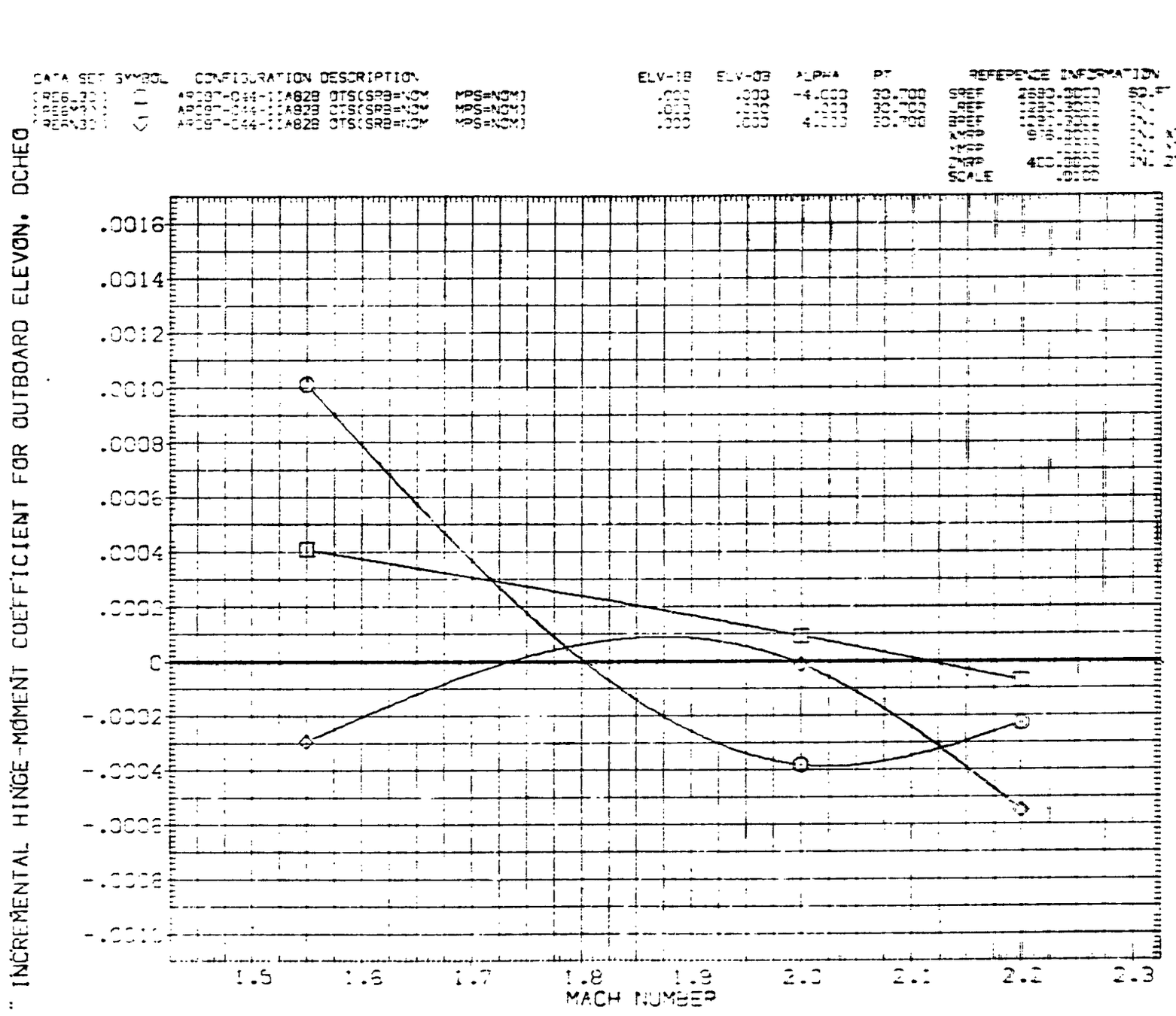


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

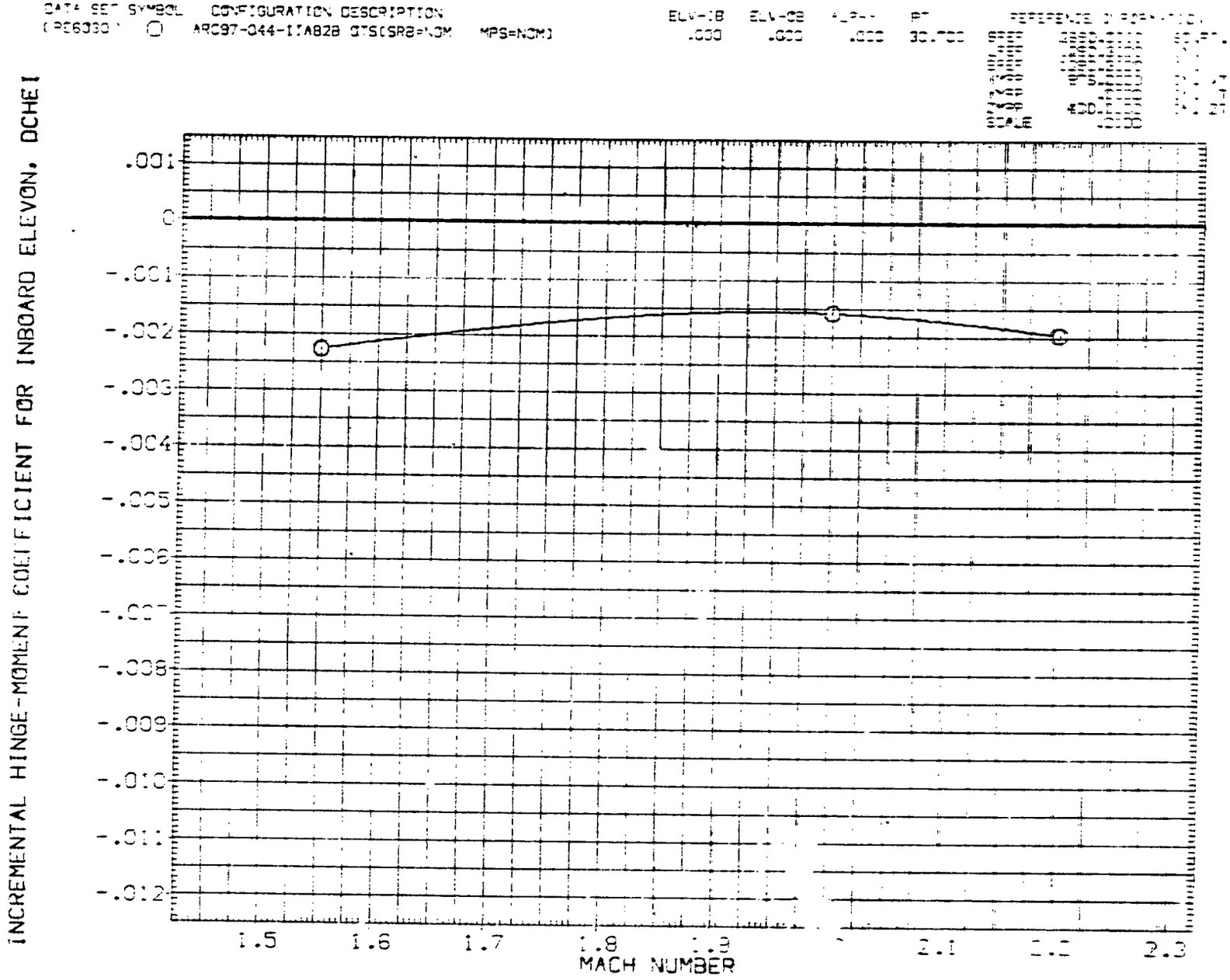


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

CADBETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE6030)	○	ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

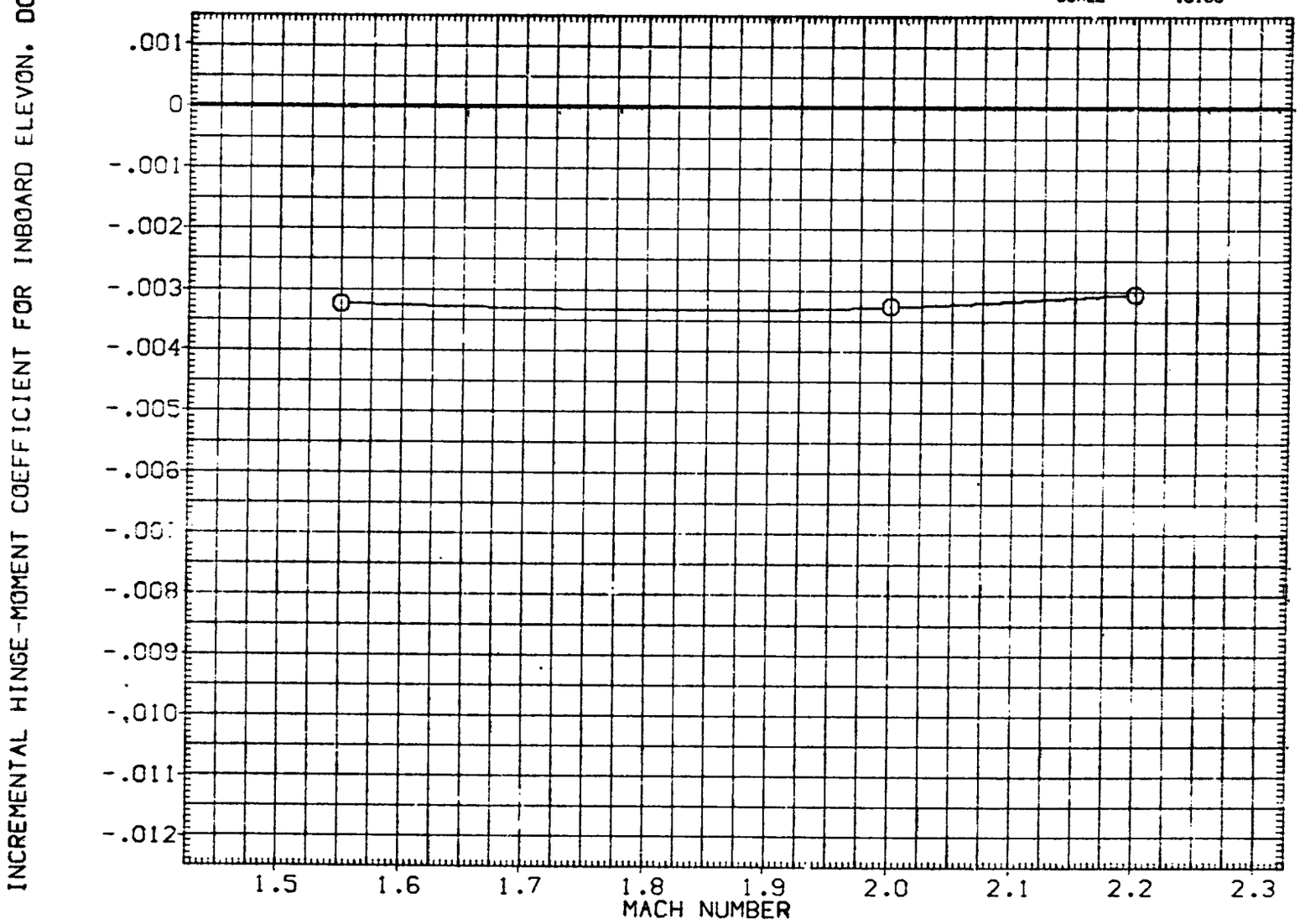


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

(B)BETA = -2.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(9E6330) ○ ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)

ELV-IB	ELV-OB	ALPHA	PT
.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

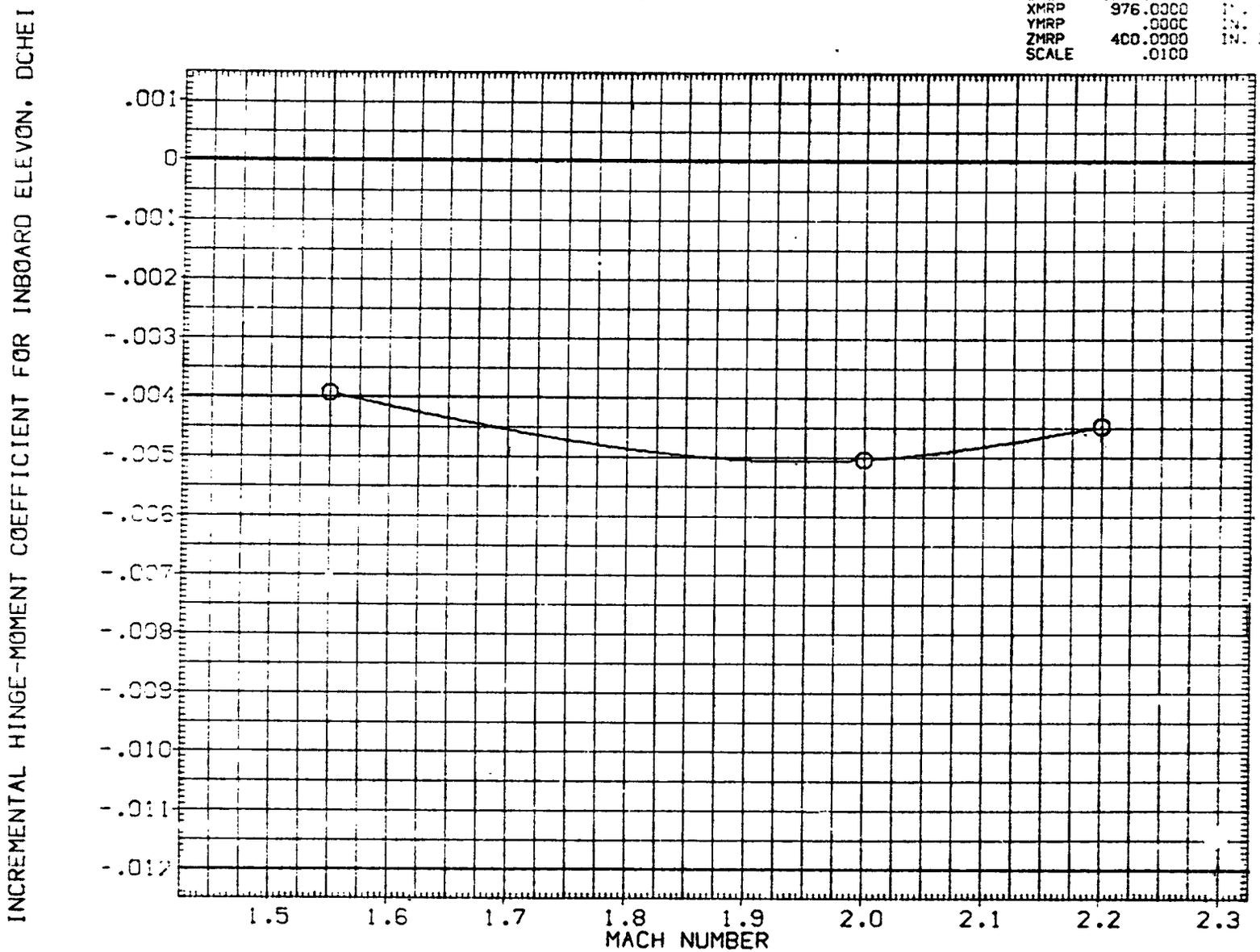


FIG.53 SUMMARY-NOMINAL PLUME FFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

(C)BETA = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE6030) ○	ARC97-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

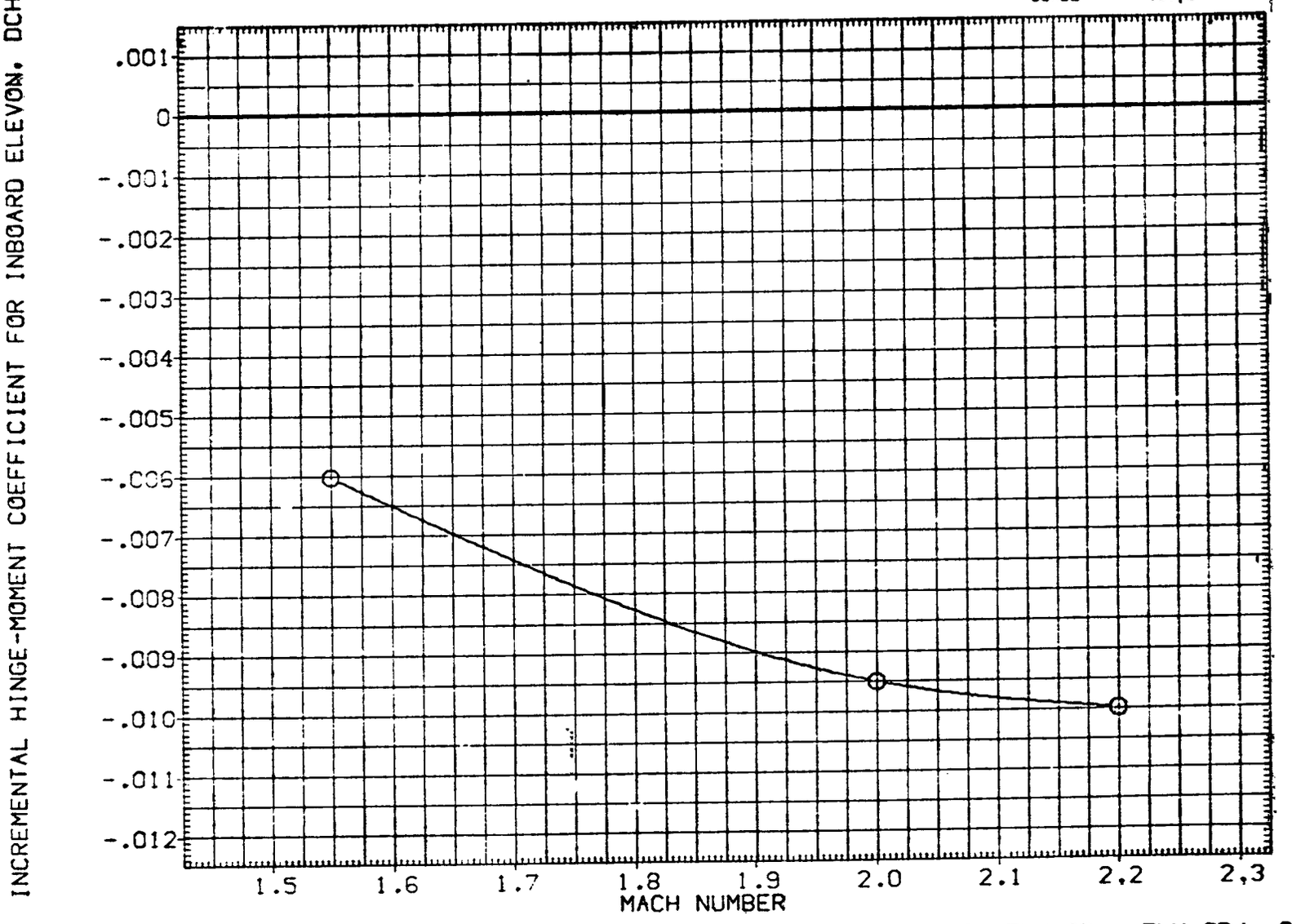


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

(D)BETA = 4.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RE6030) ○ ARC97-044-IIA82B OTS(SRB=NOM MPS=NOM)

ELV-IB	ELV-OB	ALPHA	FT
.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

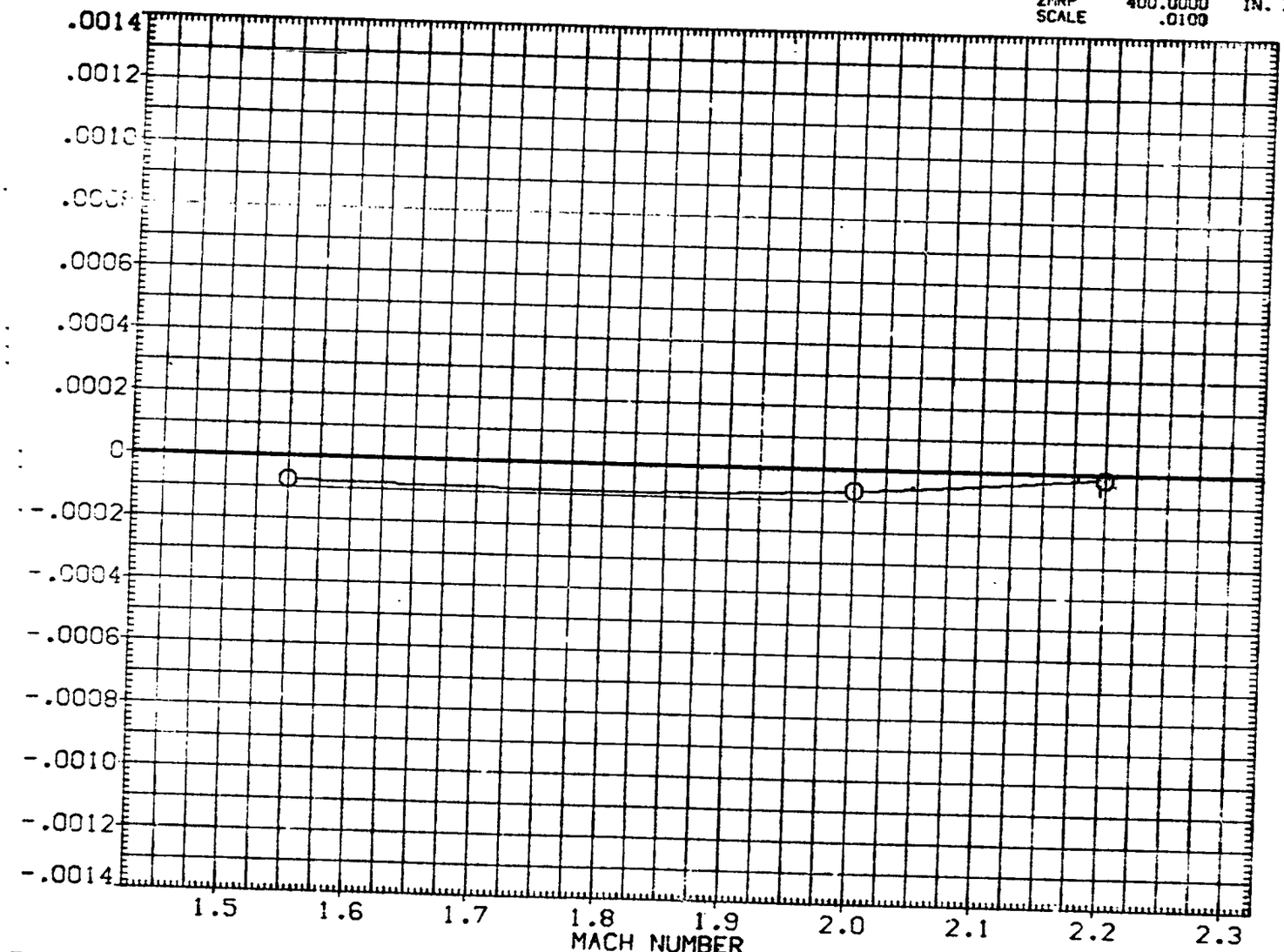


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

(A)BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE6030) ○	ARC97-044-:1A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

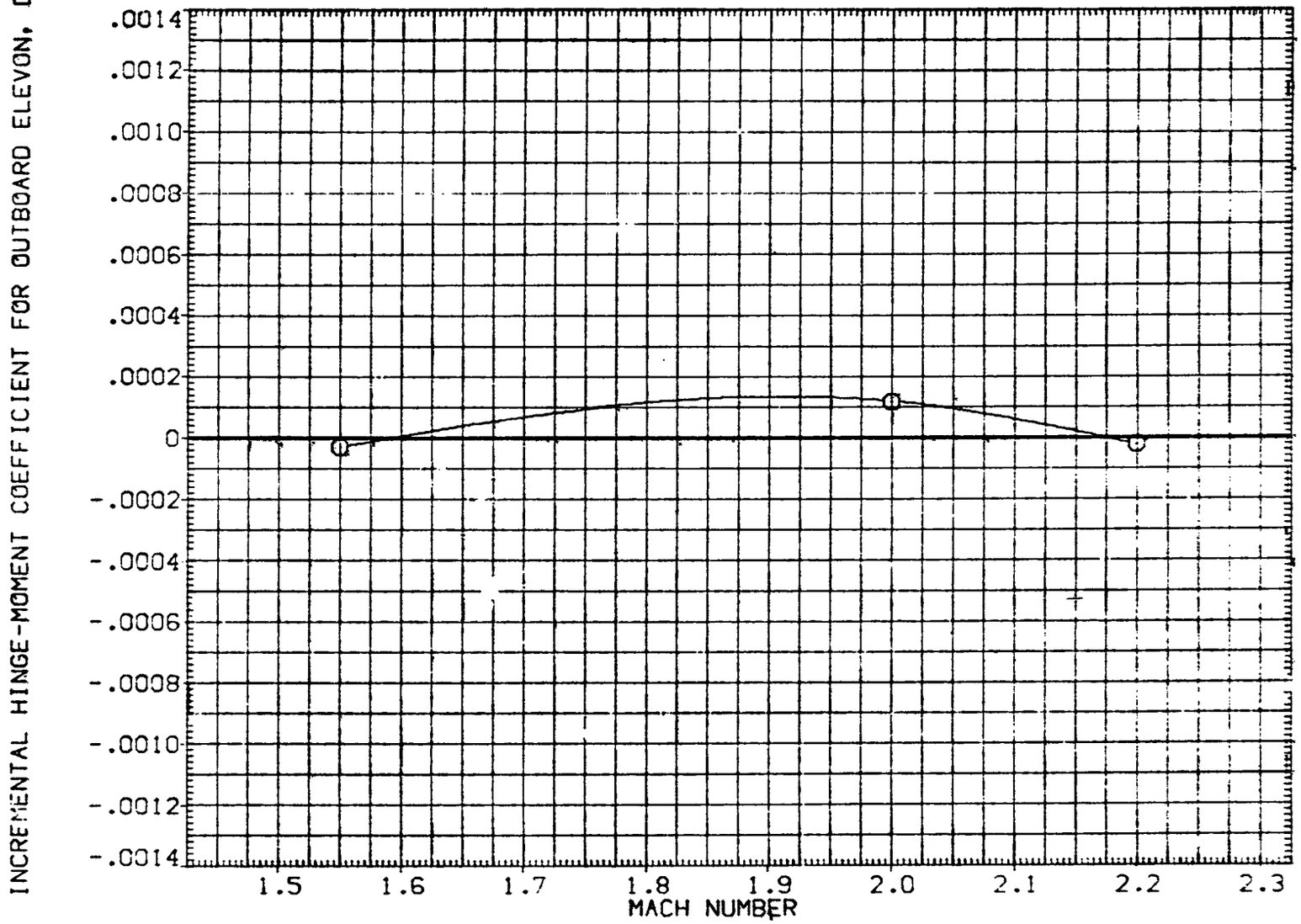


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

(B)BETA = -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE3030) ○	ARC97-044-11A82B CTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION

SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN. ZT
SCALE	.0100	

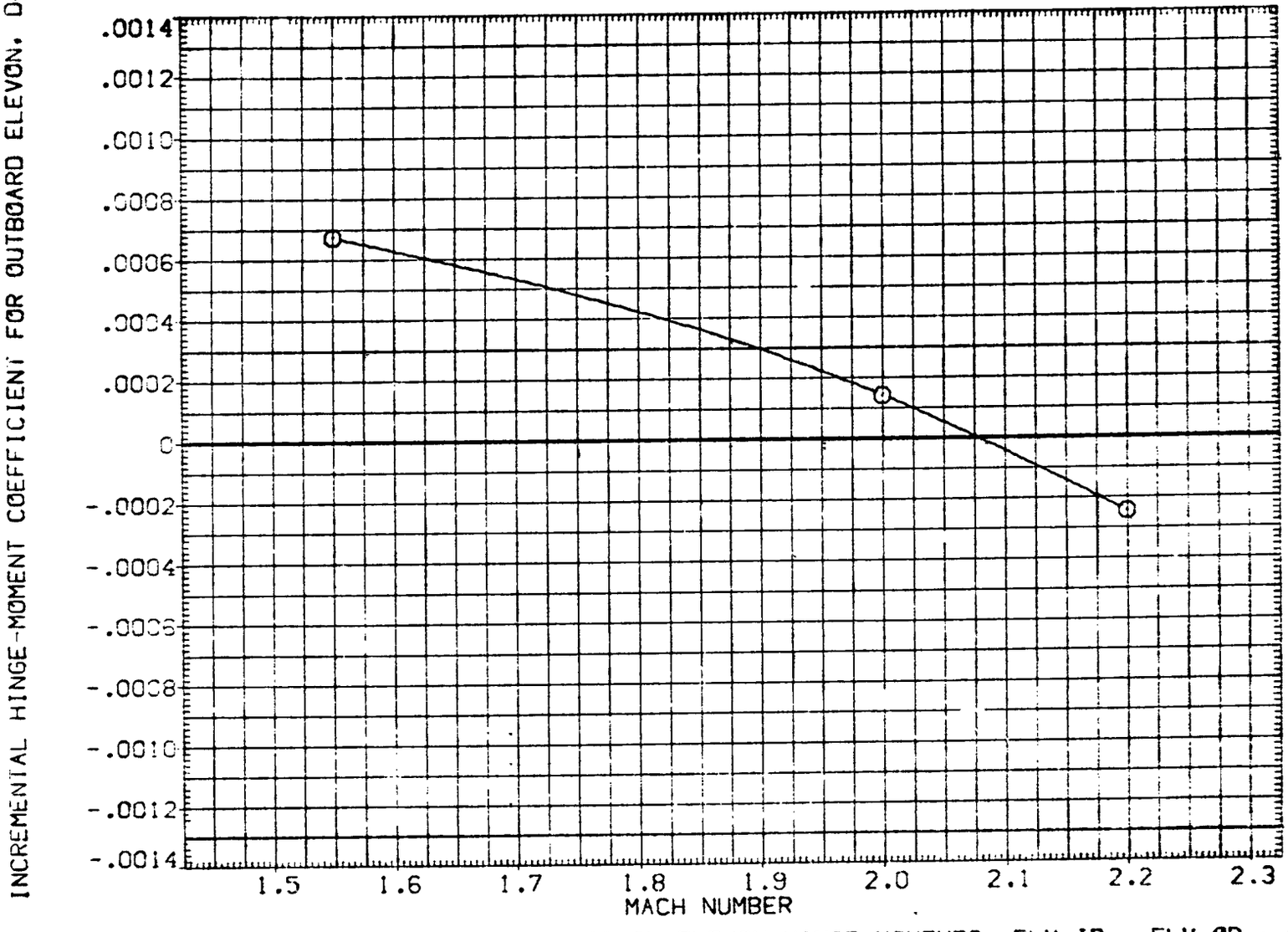


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

(C)BETA = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(RE603C)	○	ARC97-044-11A82B CTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

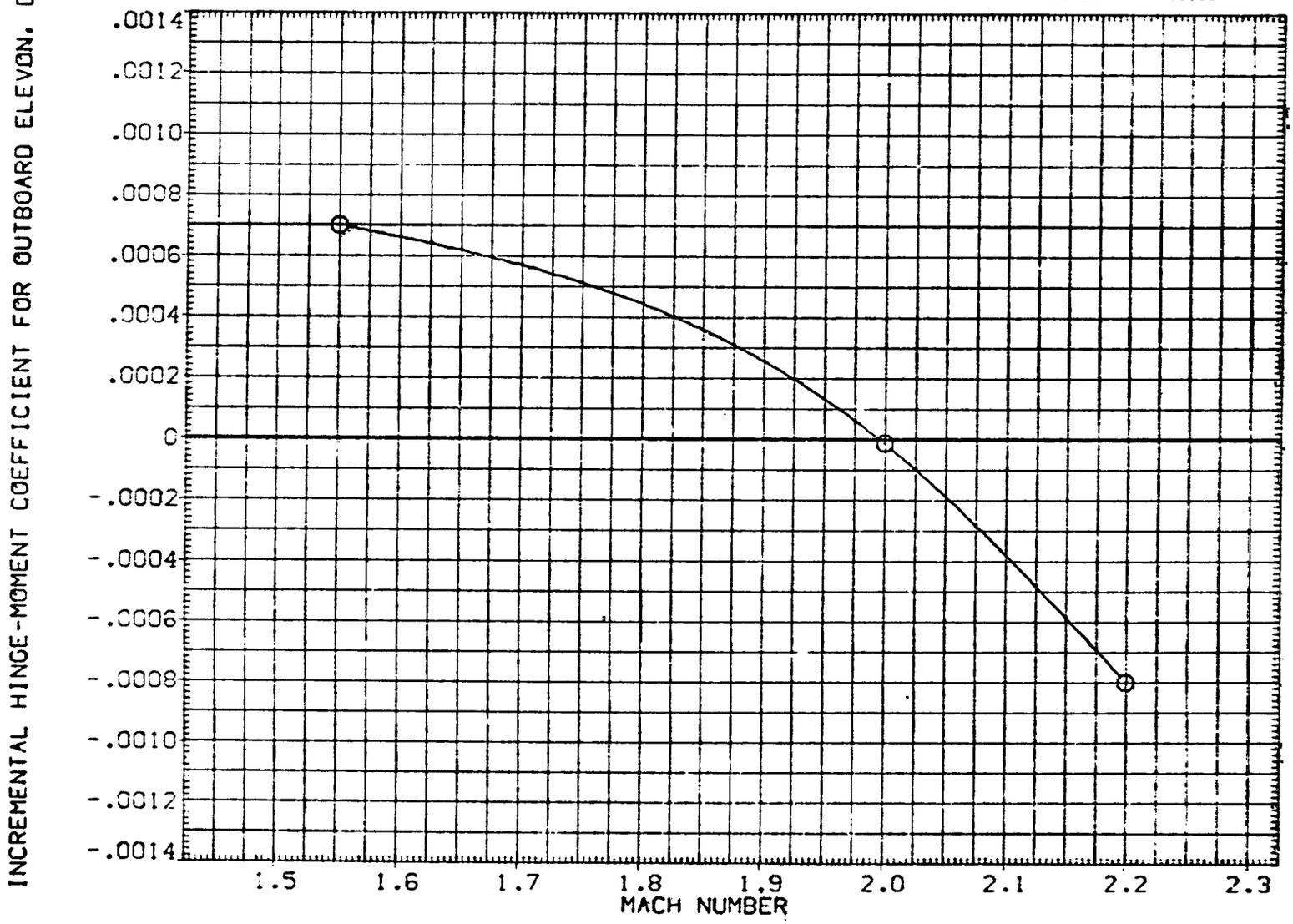


FIG.53 SUMMARY-NOMINAL PLUME EFFECT ON ELEVON HINGE MOMENTS, ELV-IB = ELV-OB = 0

(D)BETA = 4.00

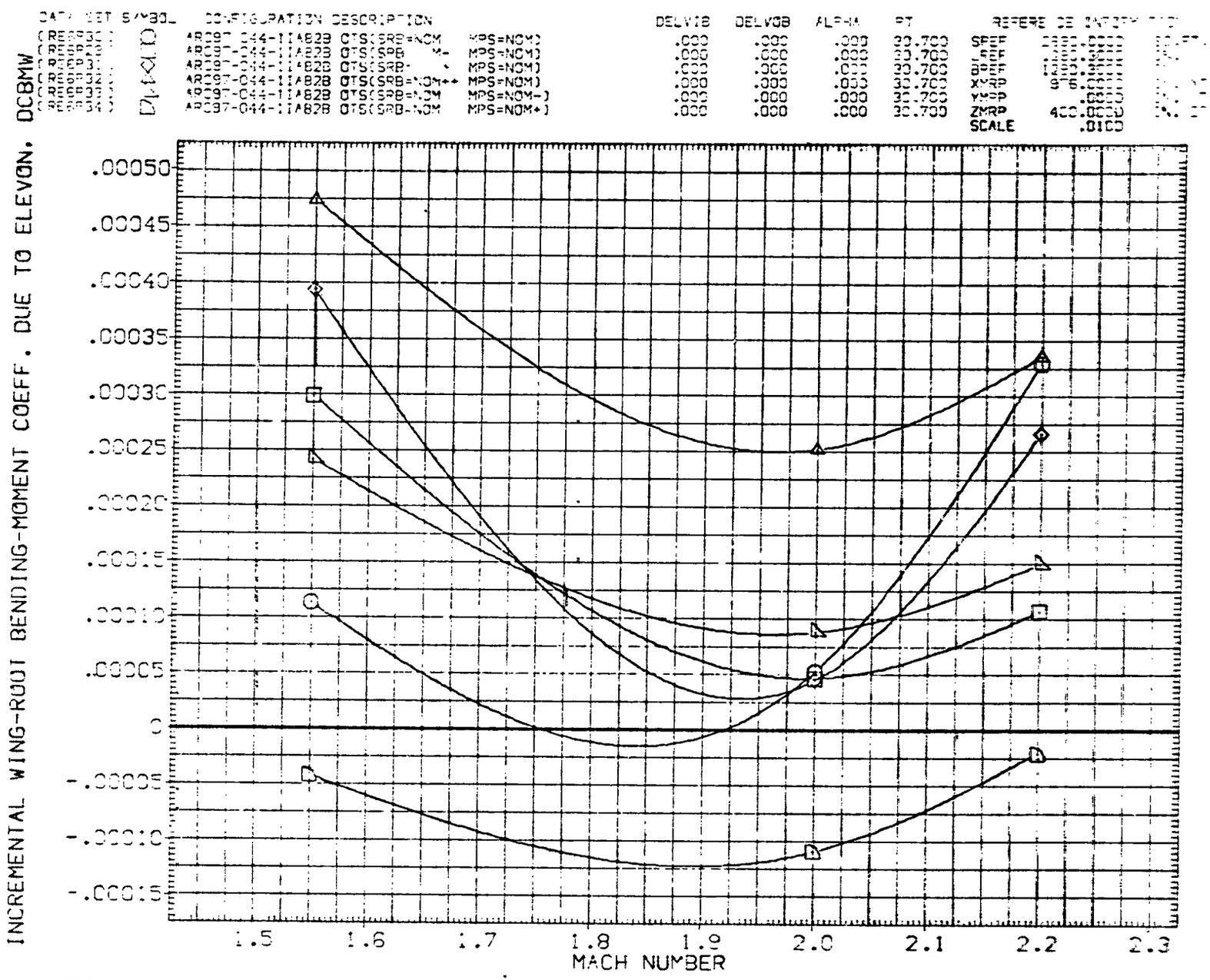


FIG.54 SUMMARY-MPS/SRB PLUME EFFECT ON WING LOADS, DELVIB=DELVOB=0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(RE6P30)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700
(PE6P29)		ARC97-044-IIA82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	.000	30.700
(PE6P31)		ARC97-044-IIA82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	.000	30.700
(PE6P32)		ARC97-044-IIA82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	.000	30.700
(PE6P33)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM-)	.000	.000	.000	30.700
(PE6P34)		ARC97-044-IIA82B OTS(SRB=NOM	MPS=NOM+)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.01C0	

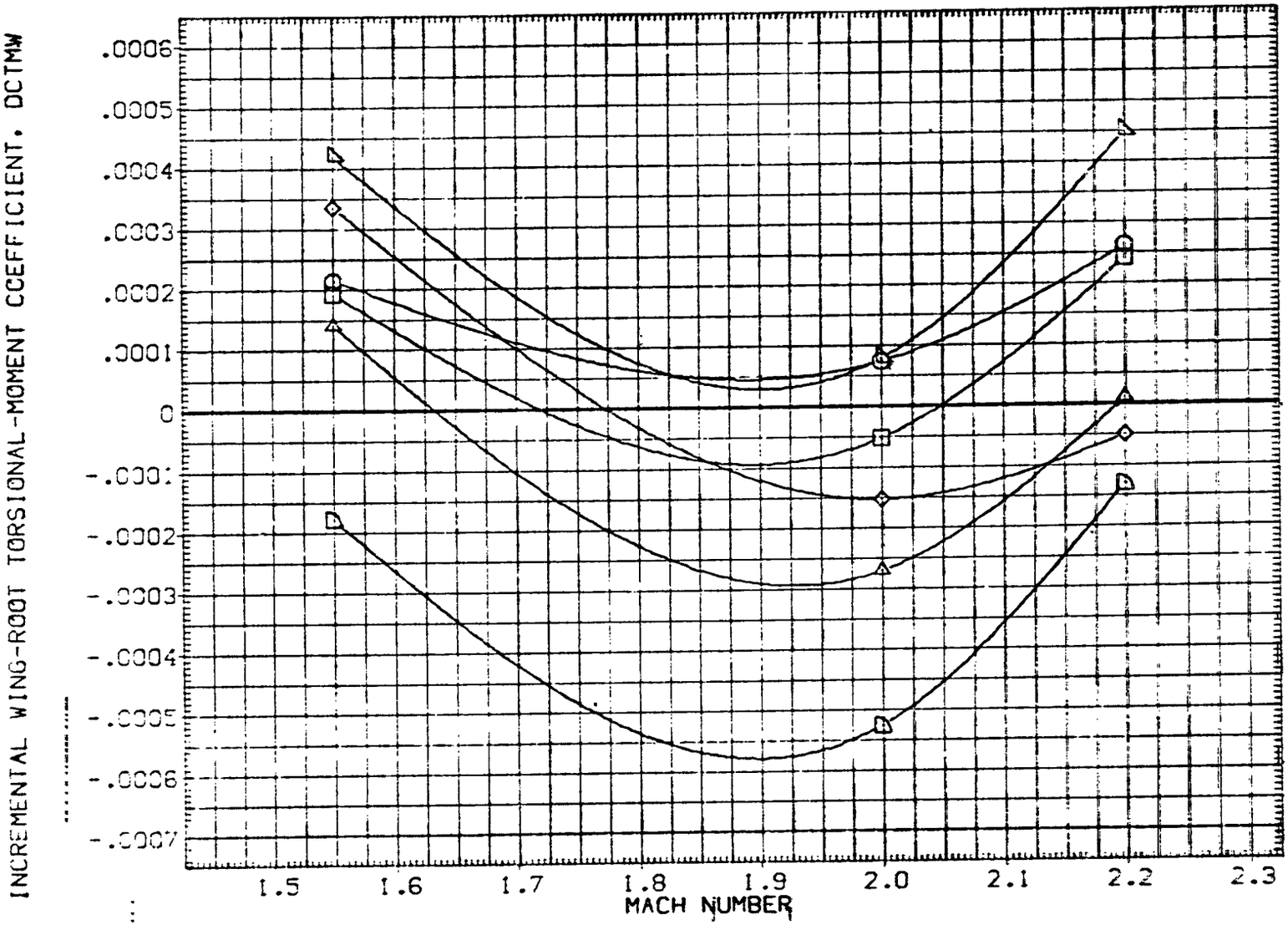


FIG.54 SUMMARY-MPS/SRB PLUME EFFECT ON WING LOADS, DELVIB=DELVOB=0

(A)BETA = .00

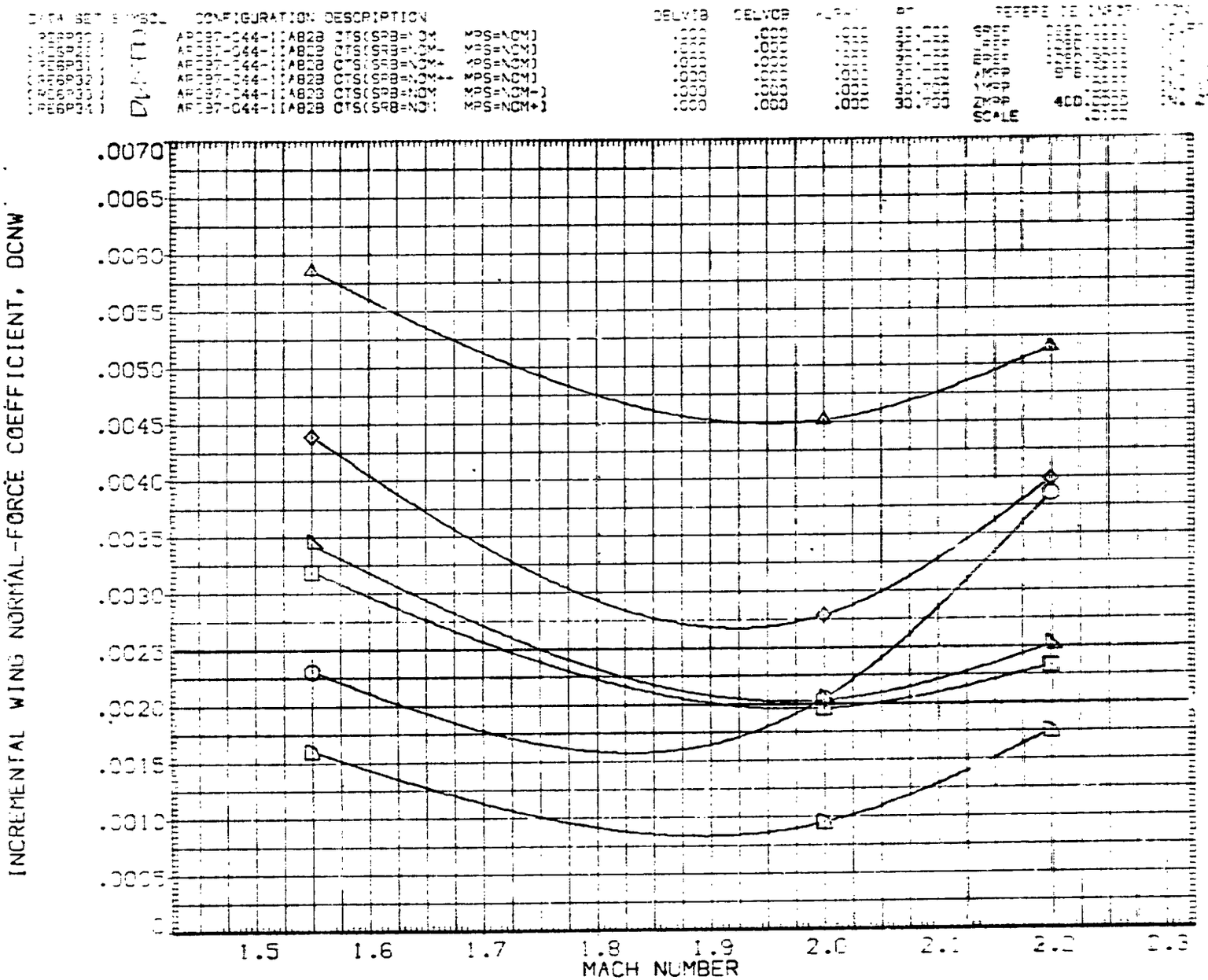


FIG.54 SUMMARY-MPS/SRB PLUME EFFECT ON WING LOADS, DELVIB=DELVOB=0

CA)BETA = .00

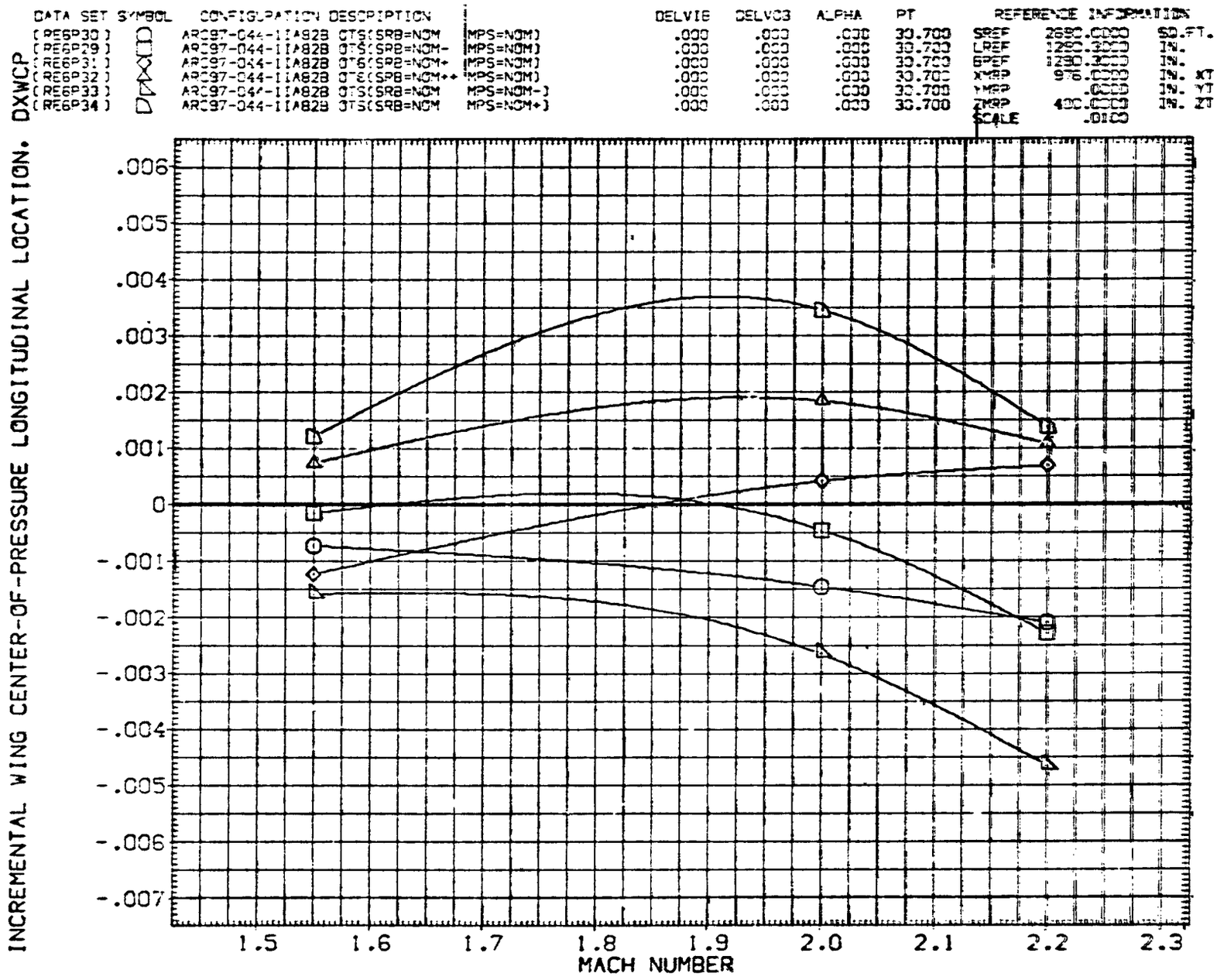


FIG.54 SUMMARY-MPS/SRB PLUME EFFECT ON WING LOADS, DELVIB=DELVCB=0

(A)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVIB	DELVOB	ALPHA	PT	REFERENCE LOADS
(AR09B3)	ARC9T-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700	SREF 3881.0000
(AR09B4)	ARC9T-044-11A82B OTS(SRB=NOM- MPS=NOM)	.000	.000	.000	30.700	LREF 1681.4400
(AR09B5)	ARC9T-044-11A82B OTS(SRB=NOM+ MPS=NOM)	.000	.000	.000	30.700	BREF 1681.4400
(AR09B2)	ARC9T-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	.000	30.700	XMRP 976.0000
(AR09B6)	ARC9T-044-11A82B OTS(SRB=NOM MPS=NOM-)	.000	.000	.000	30.700	YMRP .0000
(AR09B7)	ARC9T-044-11A82B OTS(SRB=NOM MPS=NOM+)	.000	.000	.000	30.700	ZMRP 400.0000
						SCALE .0100

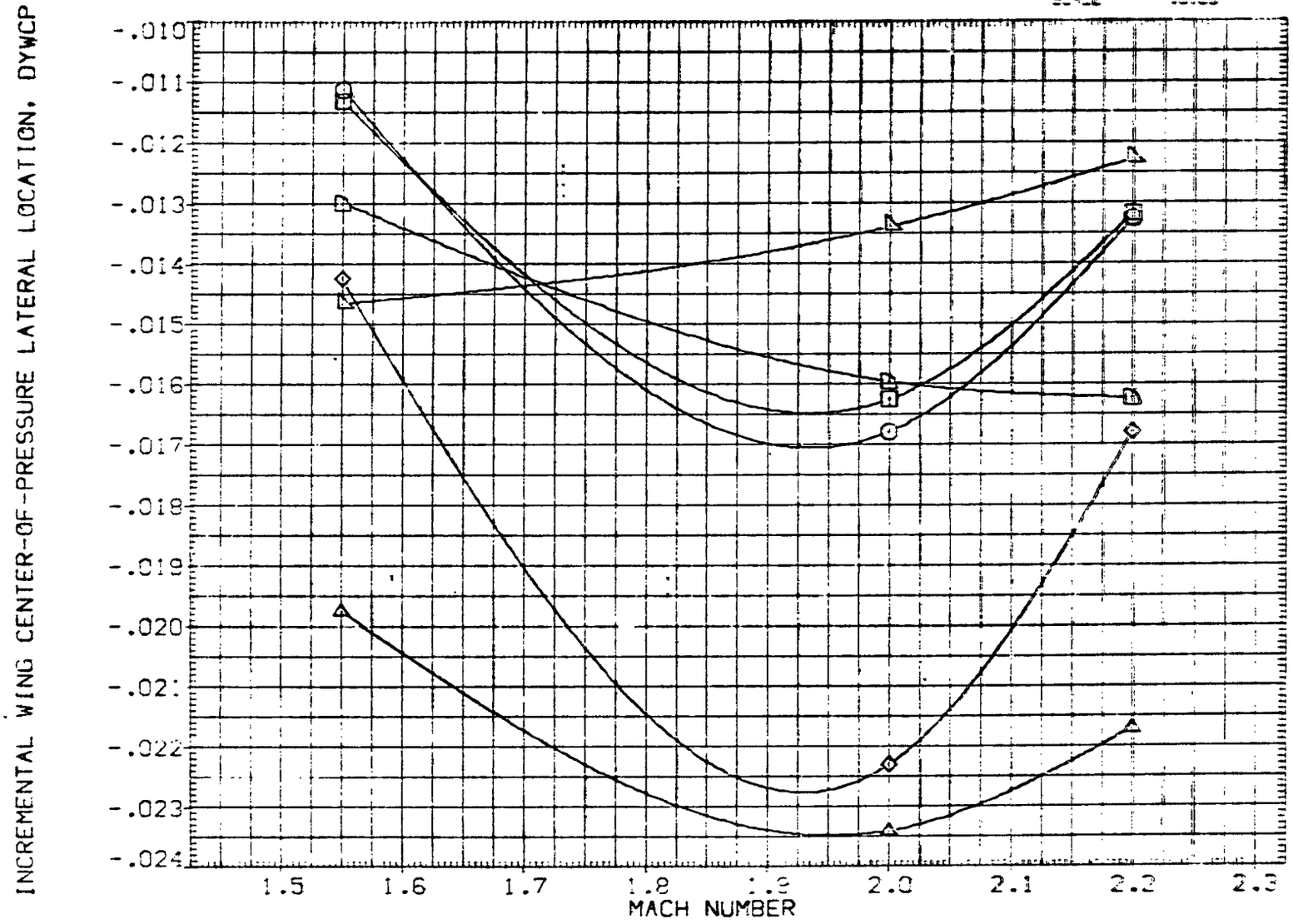


FIG.54 SUMMARY-MPS/SRB PLUME EFFECT ON WING LOADS, DELVIB=DELVOB=0

(A)BETA = .00

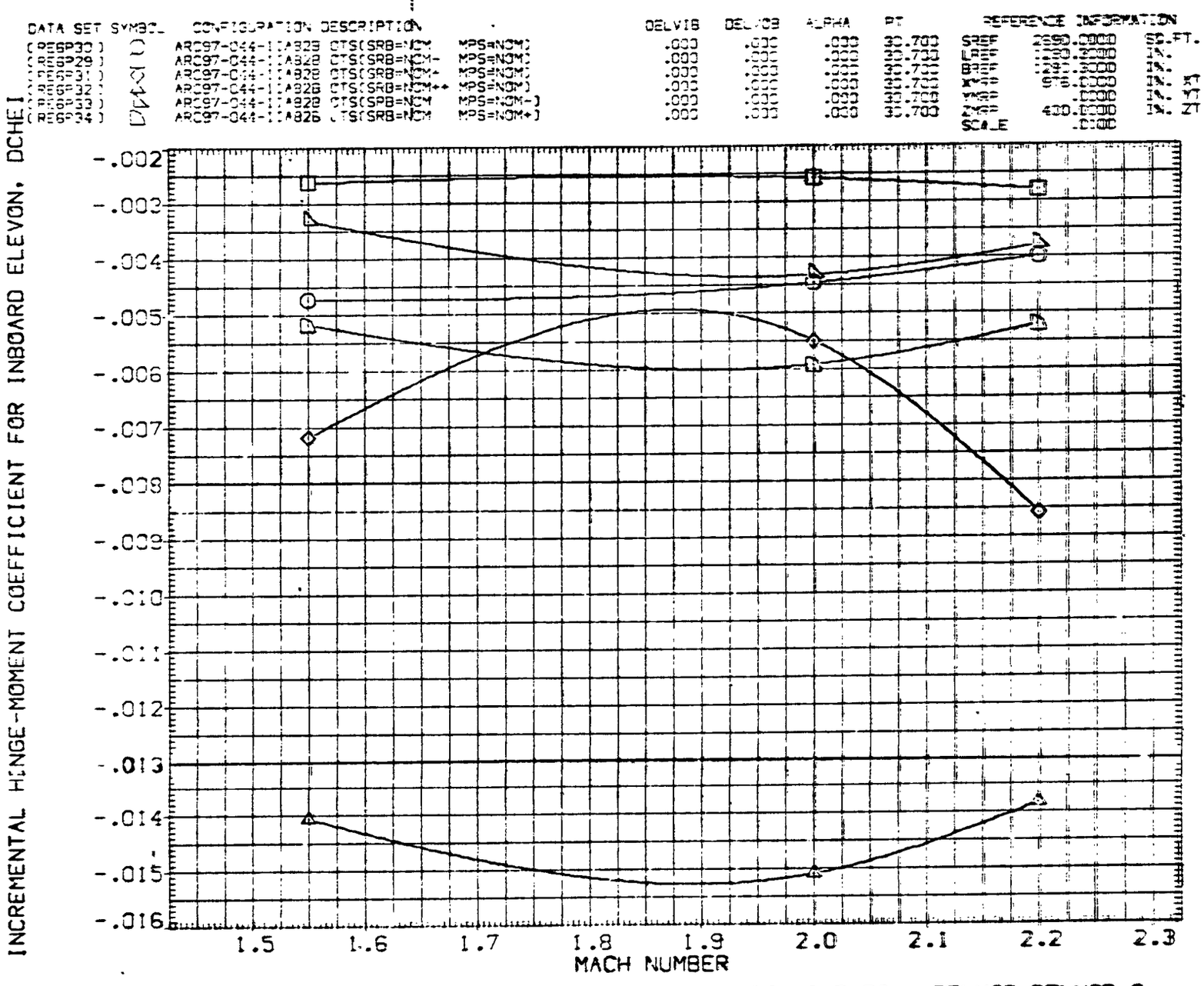


FIG.55 SUMMARY-MPS/SRB PLUME EFFECT ON ELV. HINGE MOMENTS. DELVIB=DELVOB=0

CA)BETA = .00

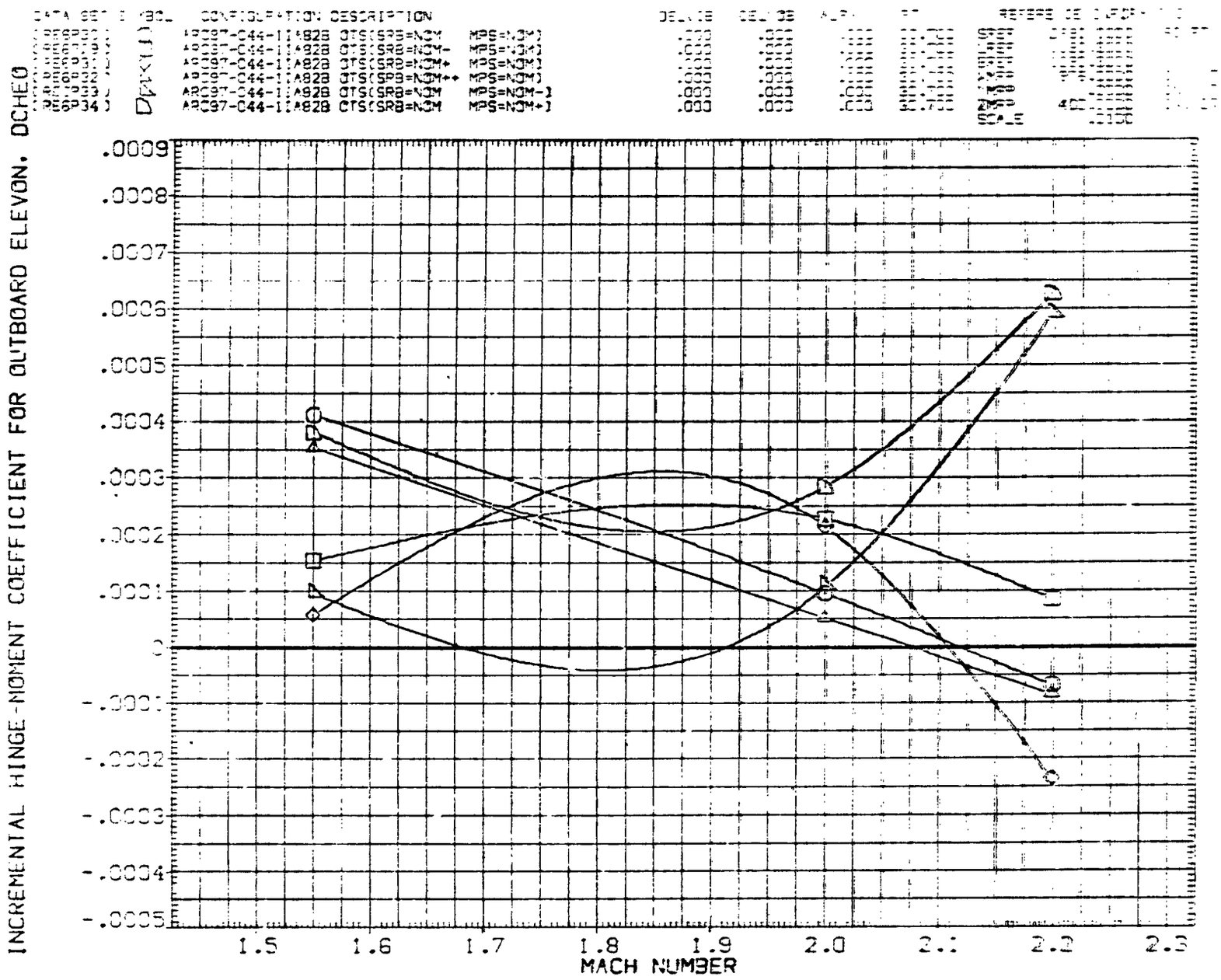


FIG.55 SUMMARY-MPS/SRB PLUME EFFECT ON ELV. HINGE MOMENTS. DELVIB=DELVOB=0

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(RE6P49)	□	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	.000	30.700
(RE6P67)	◇	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	.000	30.700
(RE6P6.)	○	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	.000	30.700
(RE6P55)	△	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

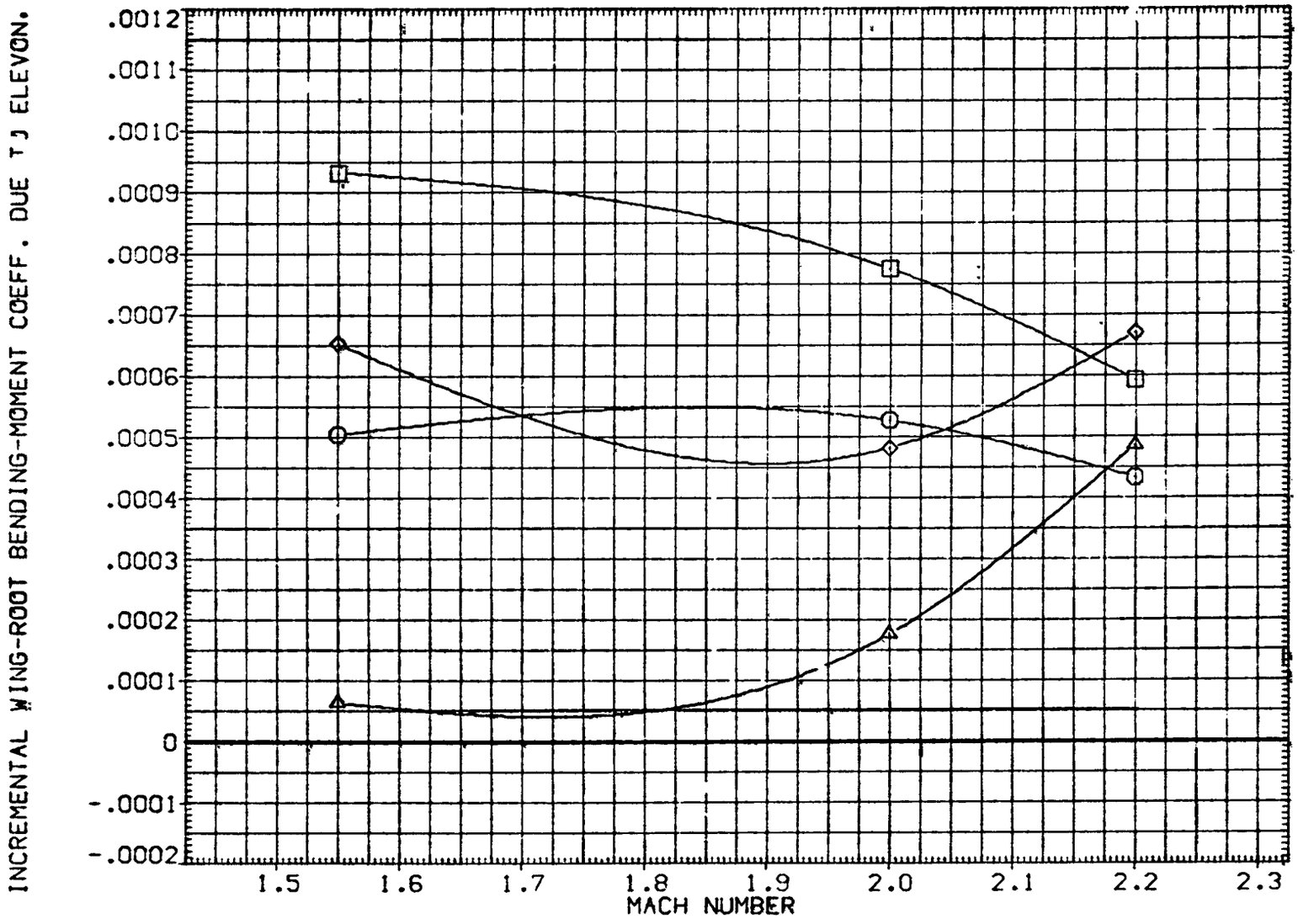


FIG.56 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, POWER OFF

(A)BETA = .00

DATA SET	CONFIGURATION DESCRIPTION	DELVIB	DELVOB	ALPHA	PT
(REGP49)	AP097-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	.000	.000	30.700
(REGP67)	AP097-044-11A82B OTS(SRB=OFF MPS=OFF)	10.000	-4.000	.000	30.700
(REGP61)	AP097-044-11A82B OTS(SRB=OFF MPS=OFF)	8.000	-4.000	.000	30.700
(REGP55)	AP097-044-11A82B OTS(SRB=OFF MPS=OFF)	4.000	-4.000	.000	30.700

REFERENCE INFORMATIO		
SREF	2690.3000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	400.0000	IN. Z
SCALE	.0100	

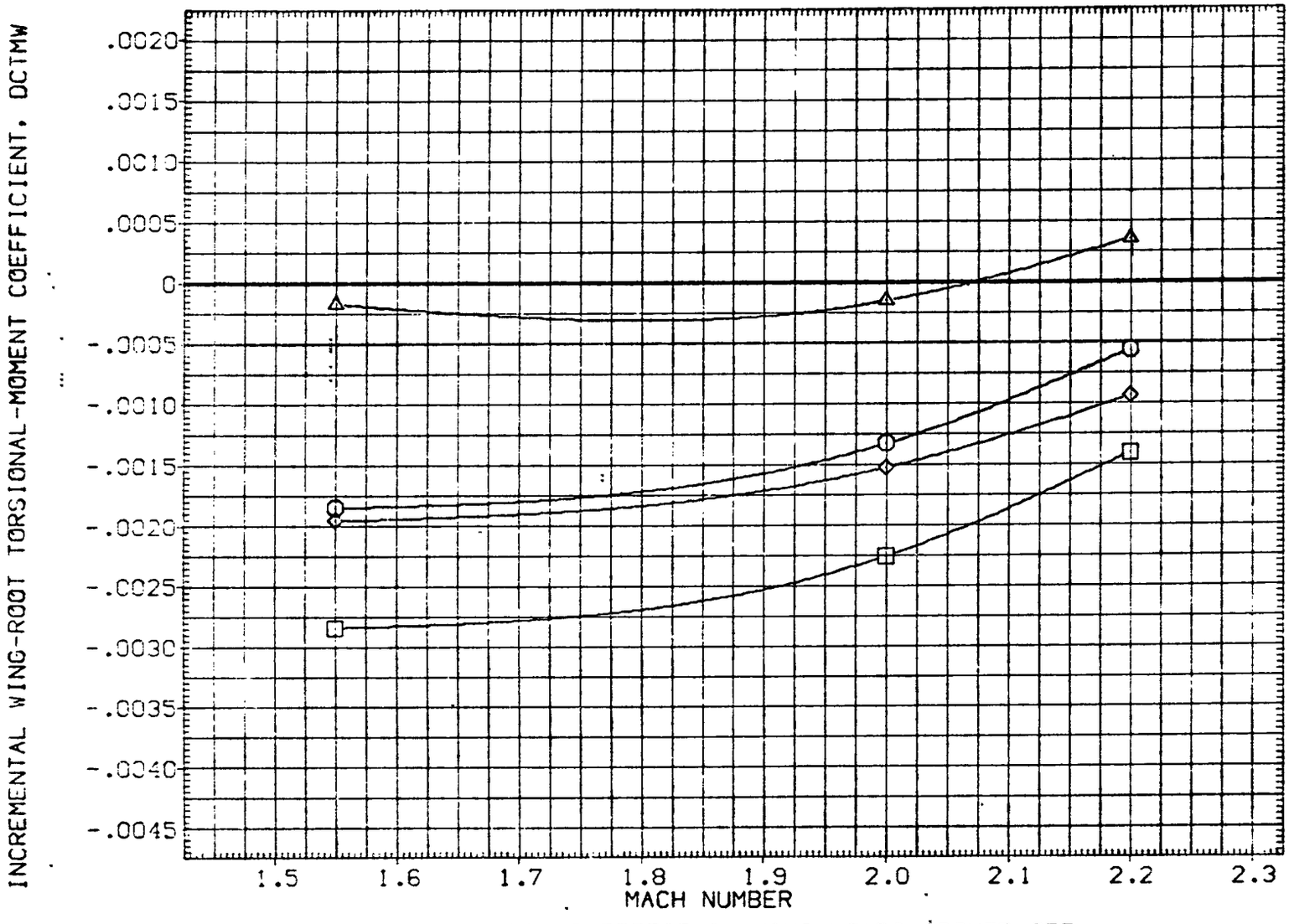


FIG.56 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, POWER OFF

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(RE6P49)	□	ARC97-044-1[A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	.000	30.700
(RE6P67)	◇	ARC97-044-1[A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	.000	30.700
(RE6P61)	△	ARC97-044-1[A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	.000	30.700
(RE6P55)	○	ARC97-044-1[A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

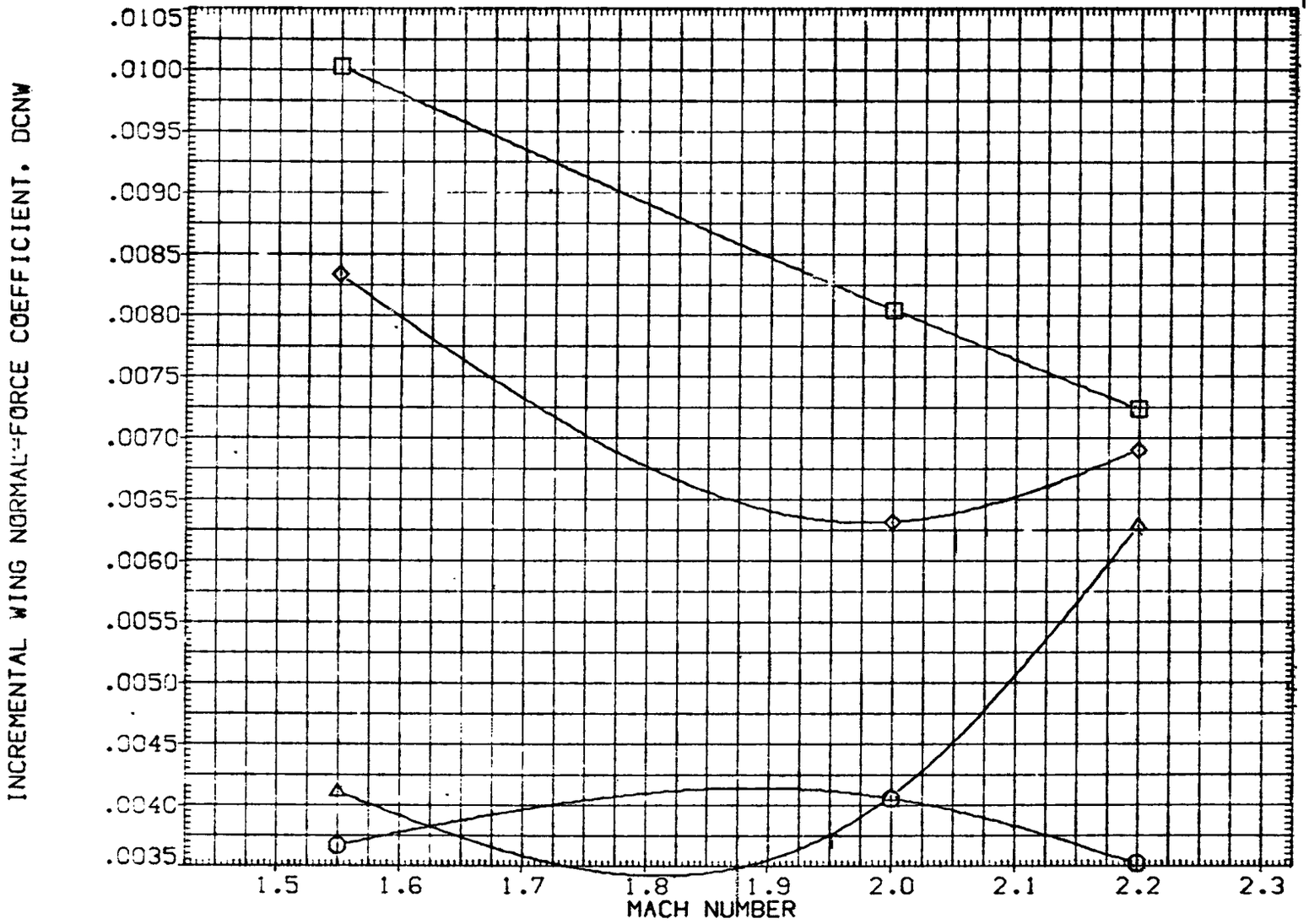


FIG.56 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, POWER OFF

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DELVIB	DELVOB	ALP-A	PT
(REE949)		AR097-044-11A828 OTS(SRB=OFF MPS=OFF)	4.000	.000	.000	30.700
(REE967)		AR097-044-11A828 OTS(SRB=OFF MPS=OFF)	10.000	-4.000	.000	30.700
(REE961)		AR097-044-11A828 OTS(SRB=OFF MPS=OFF)	8.000	-4.000	.000	30.700
(REE955)		AR097-044-11A828 OTS(SRB=OFF MPS=OFF)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

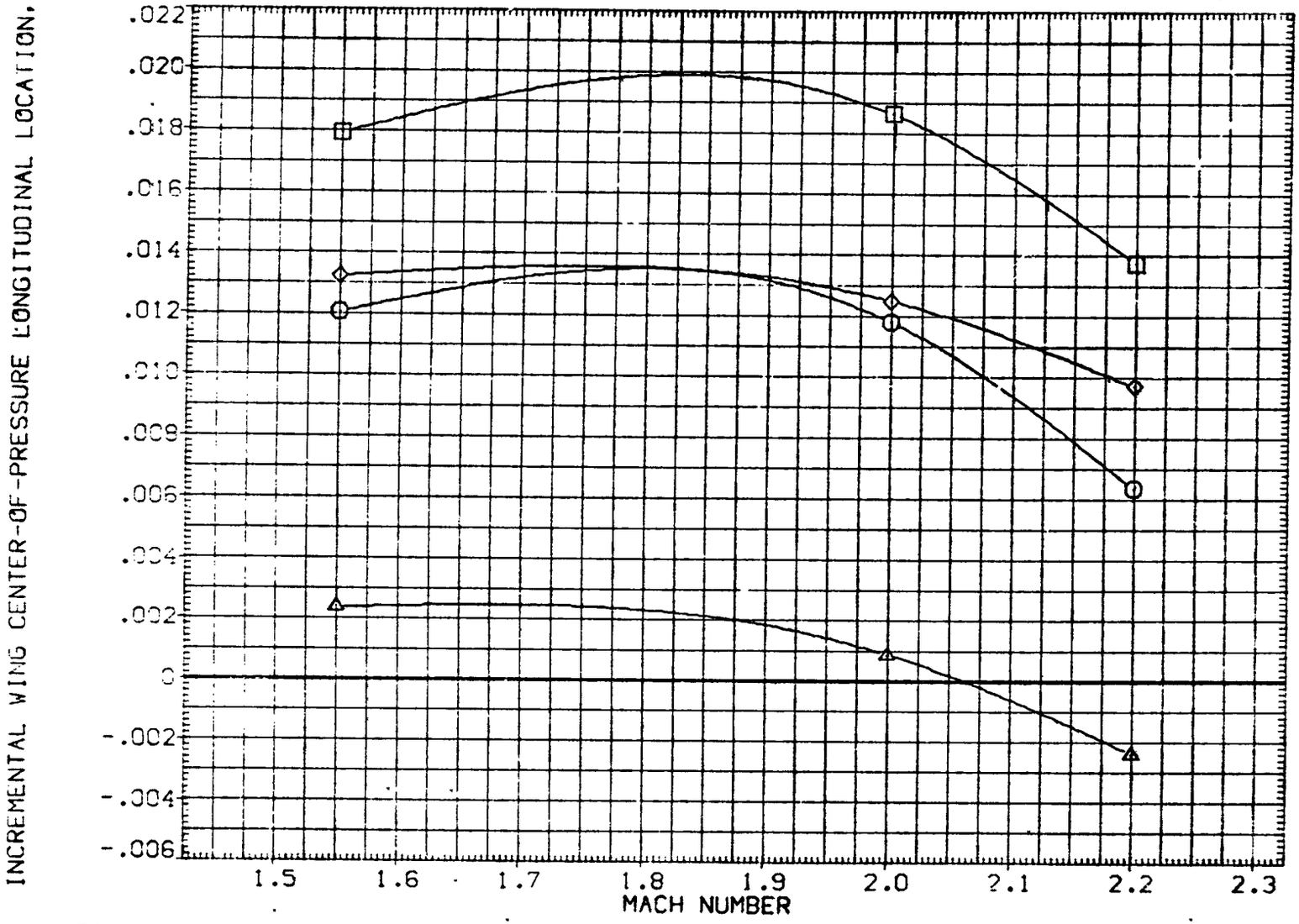


FIG.56 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, POWER OFF

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(REEP49)	○	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	.000	.000	30.700
(REAP51)	□	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	10.000	-4.000	.000	30.700
(REAP51)	△	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	8.000	-4.000	.000	30.700
(REEP53)	◇	ARC97-044-11A82B OTS(SRB=OFF	MPS=OFF)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

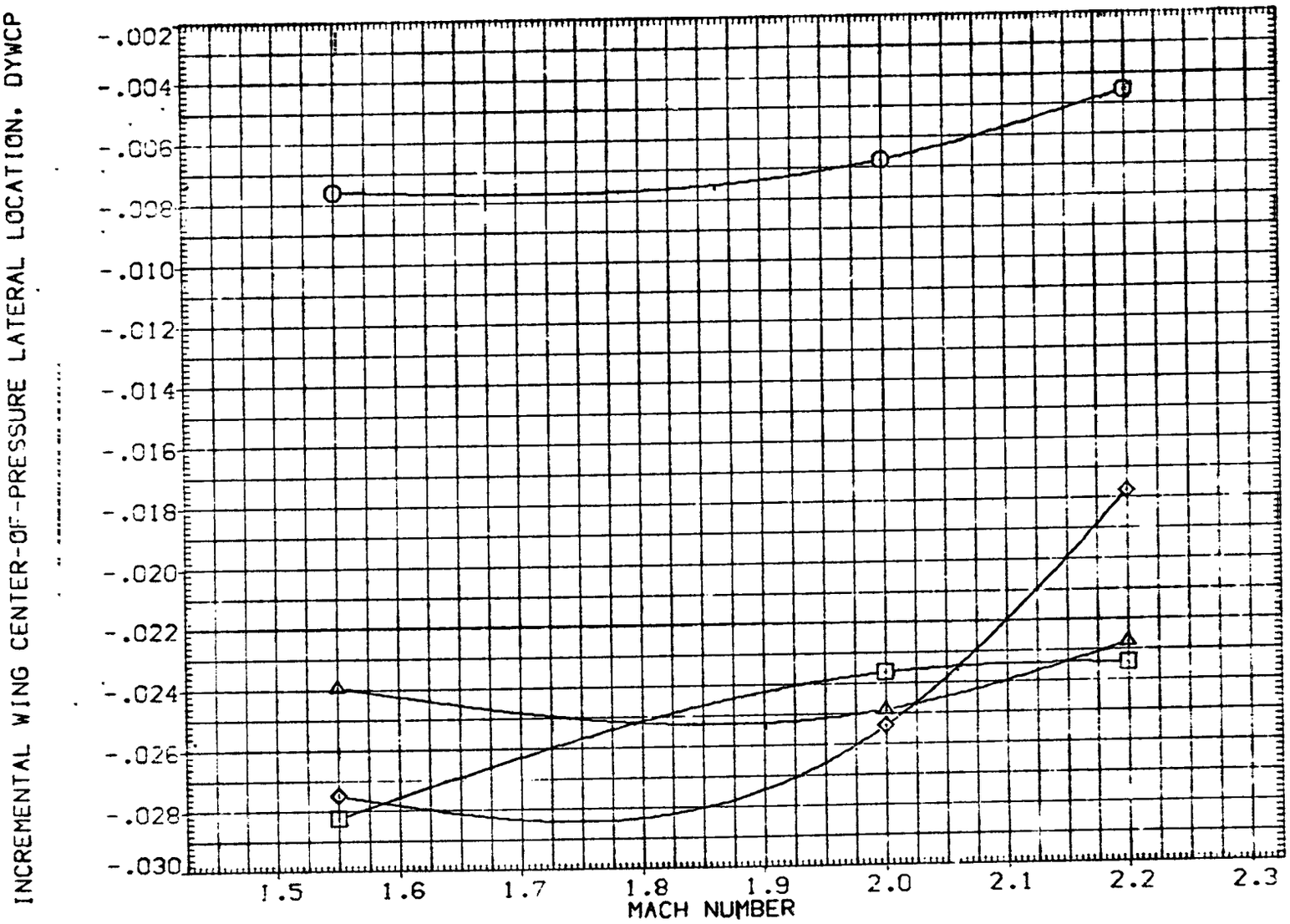


FIG.56 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, POWER OFF

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(RE6P49)	△	ARC97-044-11A828 DTS(SRB=OFF	MPS=OFF)	4.000	.000	.000	30.700
(RE6P67)	○	ARC97-044-11A828 DTS(SRB=OFF	MPS=OFF)	10.000	-4.000	.000	30.700
(RE6P61)	◇	ARC97-044-11A828 DTS(SRB=OFF	MPS=OFF)	8.000	-4.000	.000	30.700
(RE6P55)	□	ARC97-044-11A828 DTS(SRB=OFF	MPS=OFF)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION

SREF	2880.0000
LREF	1230.3300
BREF	1230.3300
XMRP	976.0000
YMRP	.0000
ZMRP	400.0000
SCALE	.0100

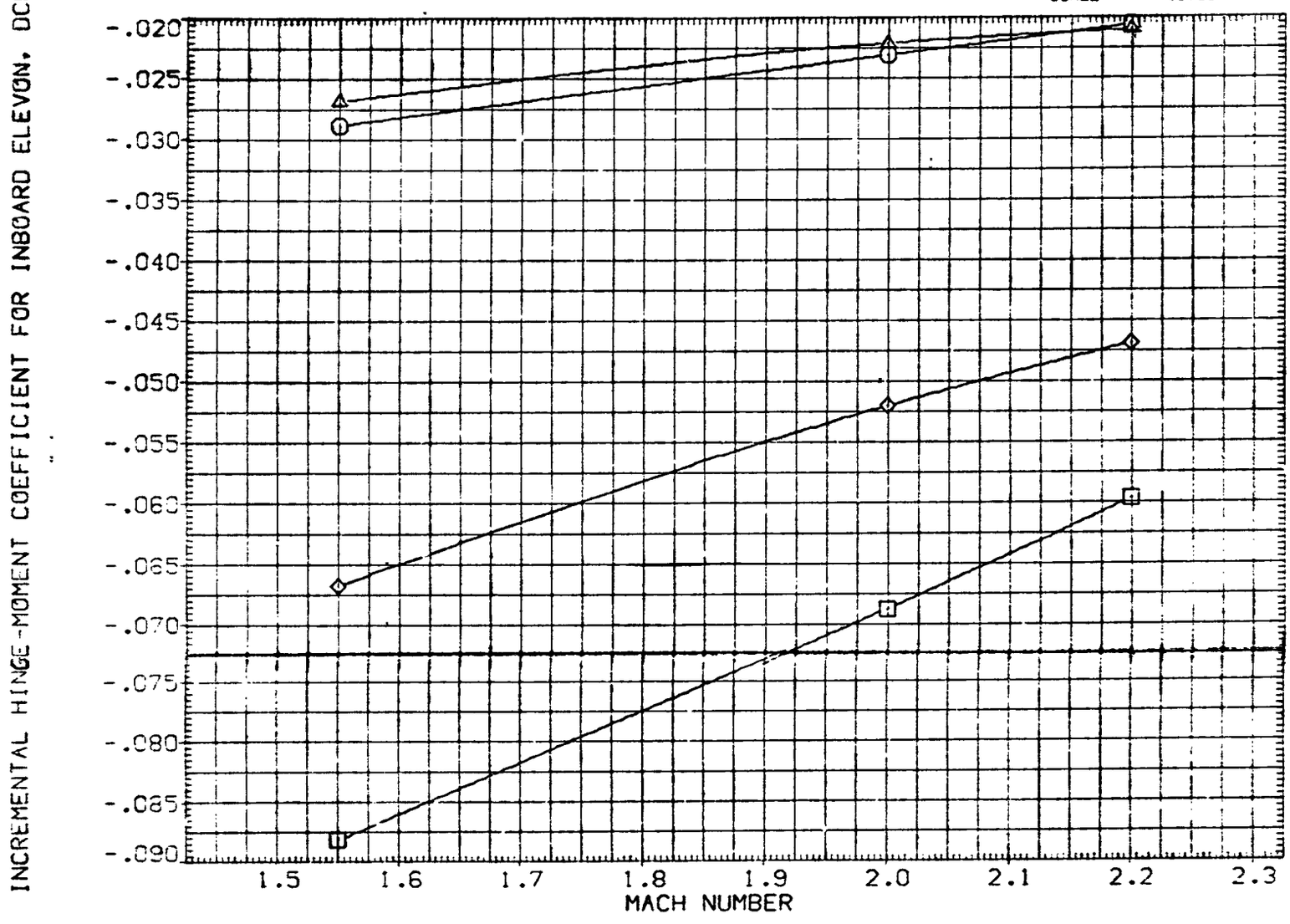


FIG.57 SUMMARY-ELEVON DEFLECTIONS EFFECT ON ELEVON HINGE MOMENT, POWER OFF

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(RE6P42)	△	ARC97-044-11A82B CTS(SRB=OFF	MPS=OFF)	4.000	.000	.000	30.700
(RE6P67)	◇	ARC97-044-11A82B CTS(SRB=OFF	MPS=OFF)	10.000	-4.000	.000	30.700
(RE6P61)	□	ARC97-044-11A82B CTS(SRB=OFF	MPS=OFF)	8.000	-4.000	.000	30.700
(RE6P55)	○	ARC97-044-11A82B CTS(SRB=OFF	MPS=OFF)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

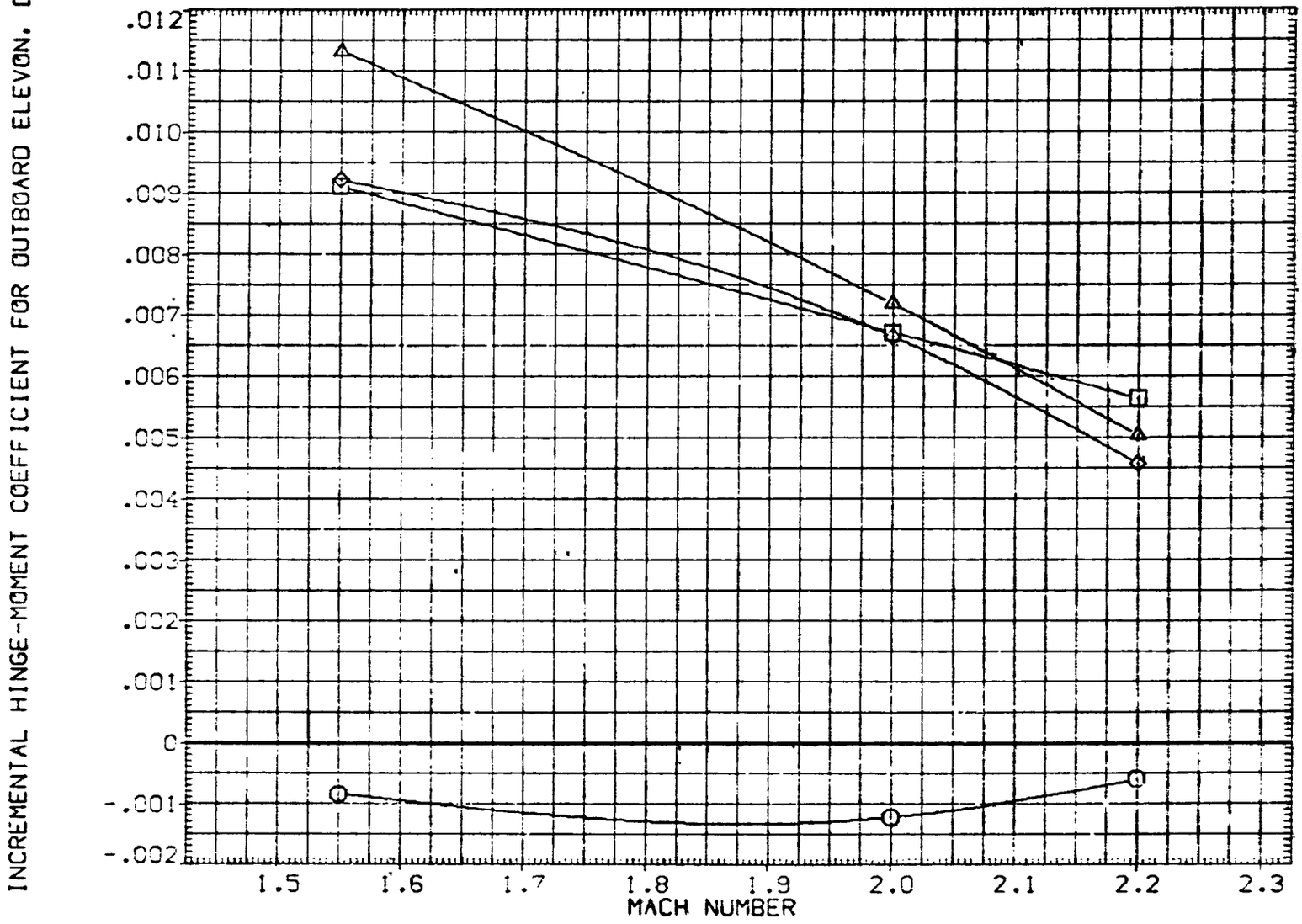


FIG.57 SUMMARY-ELEVON DEFLECTIONS EFFECT ON ELEVON HINGE MOMENT, POWER OFF

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
RE6P5S2		ARC97-C44-11A82B OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	.000	30.700
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
RE6P56		ARC97-C44-11A82B OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1260.0000	IN.
BREF	1260.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0100	

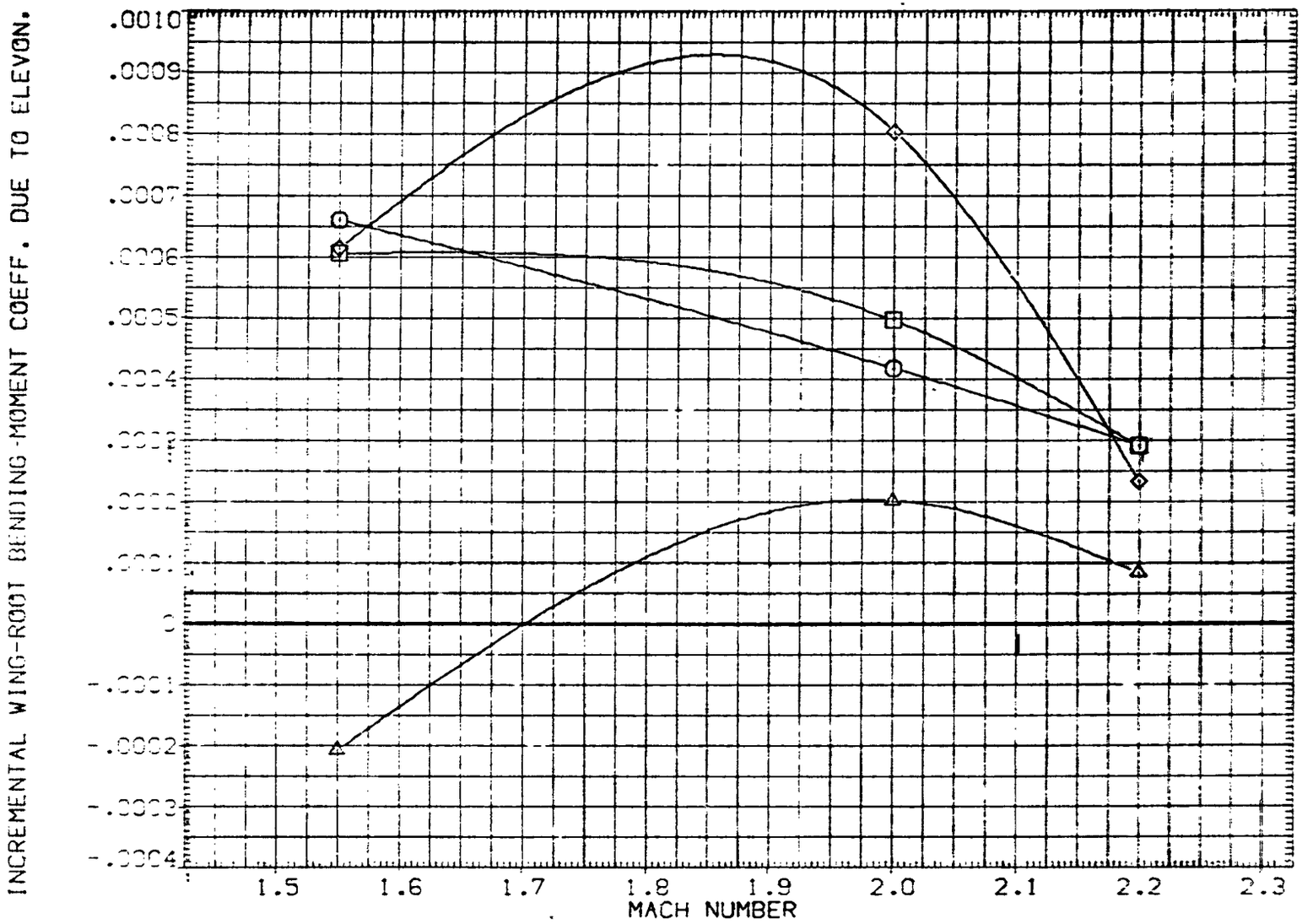


FIG.58 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, NOMINAL POWER ON

CA(BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(RE6P50)	△	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	.000	.000	30.700
(RE6P62)	□	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	8.000	-4.000	.000	30.700
(RE6P68)	◇	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	10.000	-4.000	.000	30.700
(RE6P56)	○	ARC97-044-11A828 OTS(SRB=NOM	MPS=NOM)	4.000	-4.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

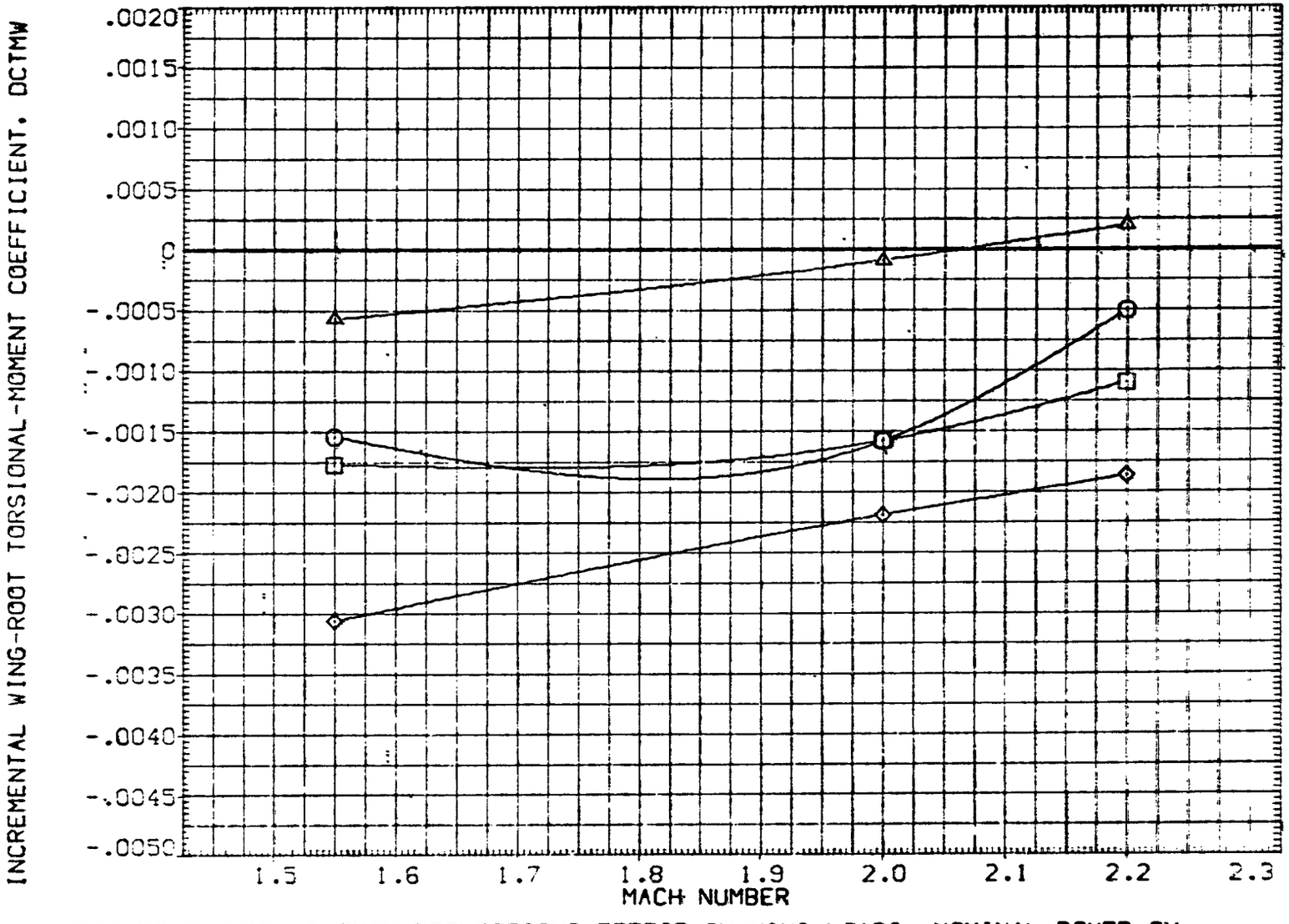


FIG.58 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, NOMINAL POWER ON

(A)BETA = .00

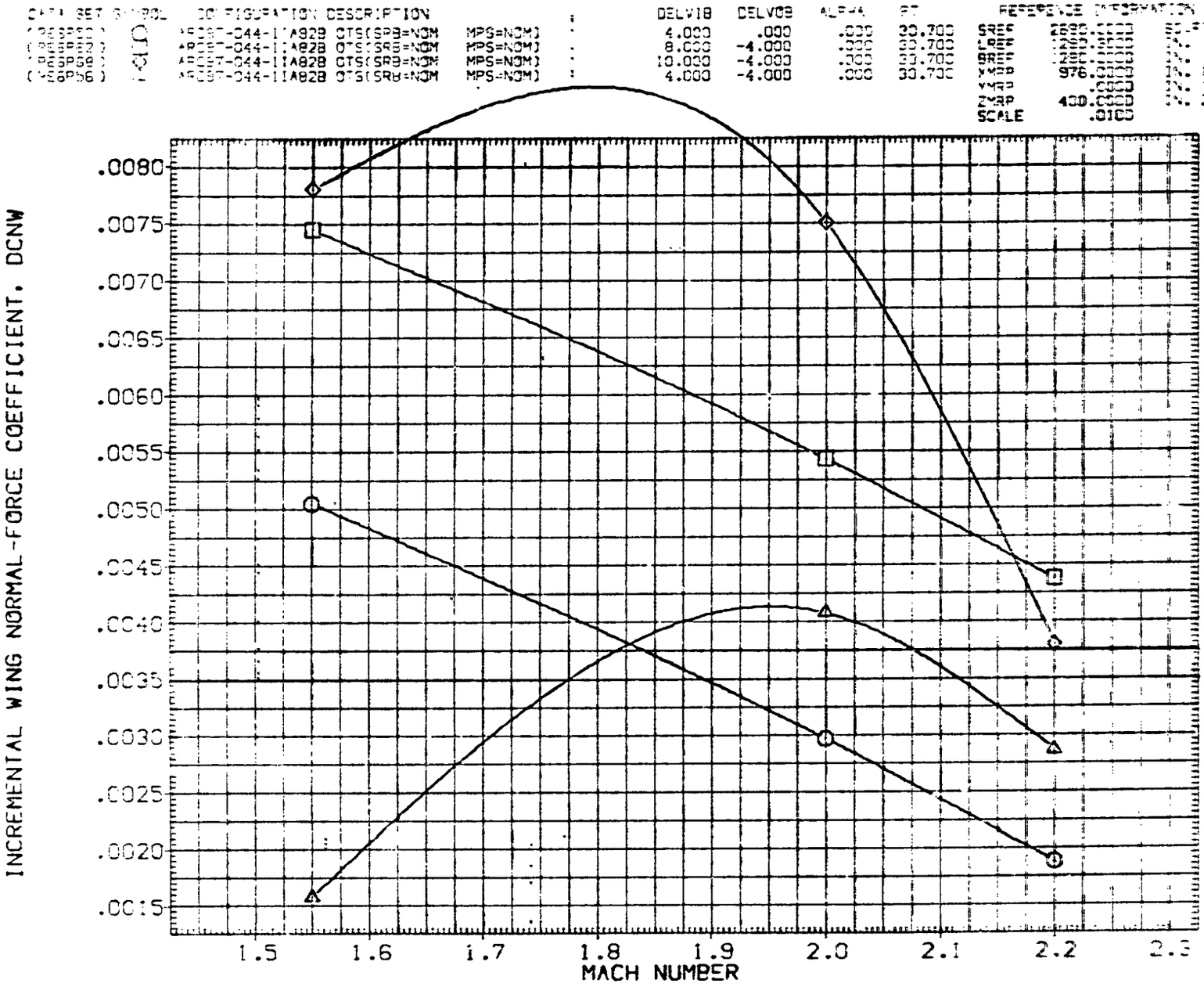


FIG.58 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, NOMINAL POWER ON

(A)BETA = .00

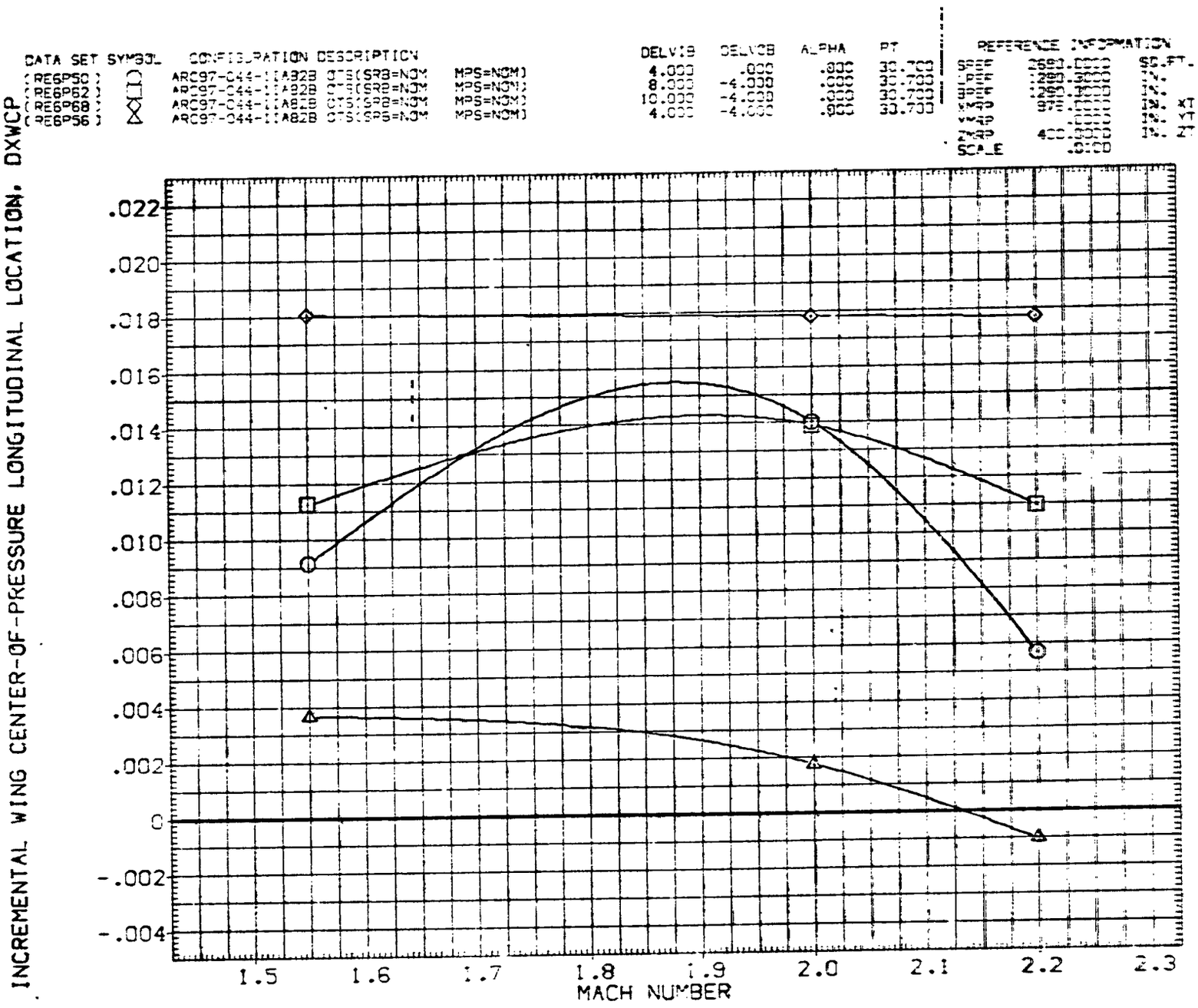


FIG.58 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, NOMINAL POWER ON

(A)BETA = .00

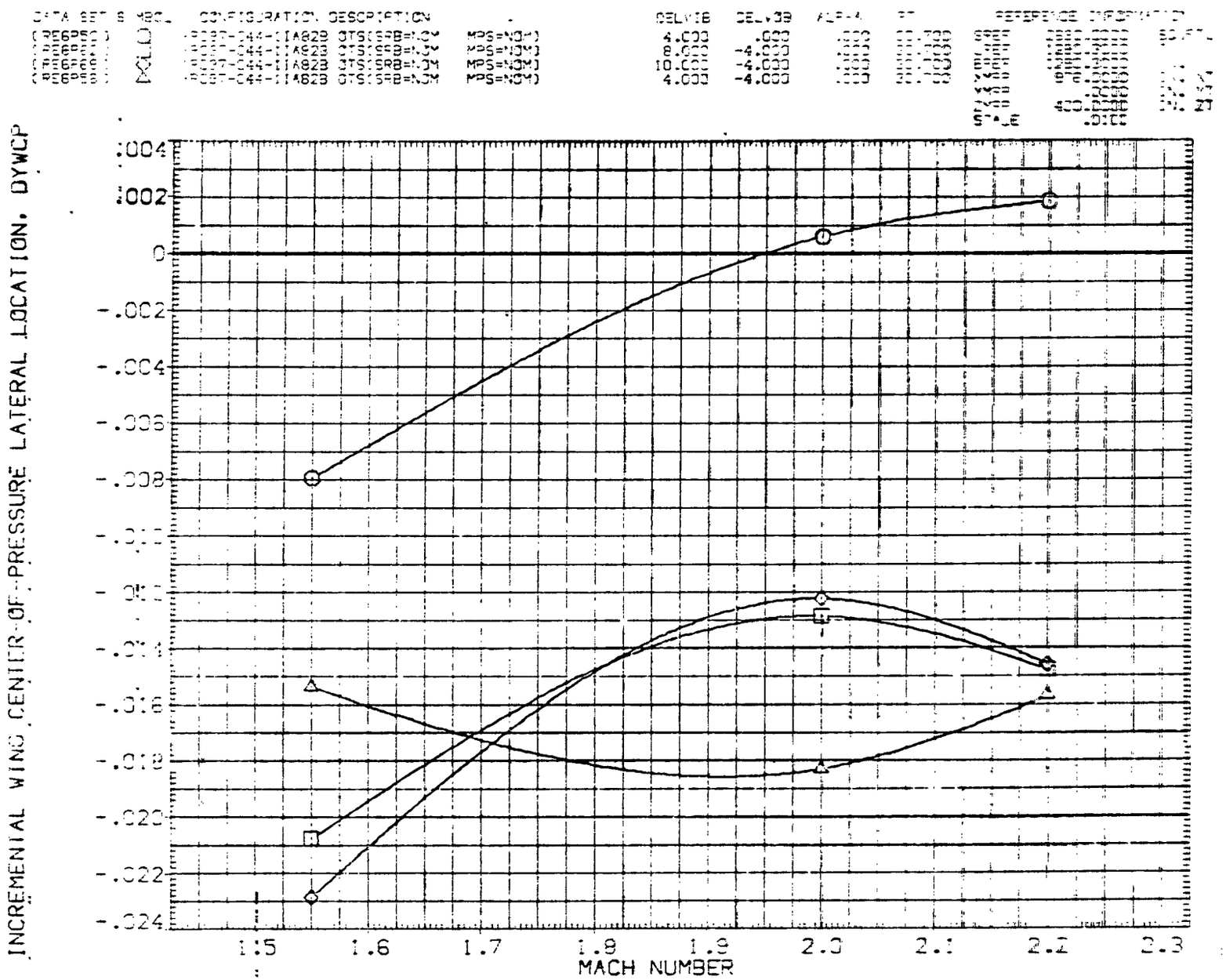


FIG.58 SUMMARY-ELEVON DEFLECTIONS EFFECT ON WING LOADS, NOMINAL POWER ON

CA)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT
(RE6P50)	△	ARC97-044-11A828 OTS(SRB=NOM	MBS=NOM)	4.000	.000	.000	30.720
(RE6P62)	□	ARC97-044-11A828 OTS(SRB=NOM	MBS=NOM)	8.000	-4.000	.000	30.720
(RE6P69)	◇	ARC97-044-11A828 OTS(SRB=NOM	MBS=NOM)	10.000	-4.000	.000	30.720
(RE6P55)	○	ARC97-044-11A828 OTS(SRB=NOM	MBS=NOM)	4.000	-4.000	.000	30.720

REFERENCE INFORMATION

SREF 2690.1100 SQ.FT.
LREF 1290.1300
BREF 780.1000
XMRP 455.0000
SCALE .0100

INCREMENTAL HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, DCHEI

-.015
-.020
-.025
-.030
-.035
-.040
-.045
-.050
-.055
-.060
-.065
-.070
-.075
-.080
-.085

1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3

MACH NUMBER

FIG.59 SUMMARY-ELEVON DEFLECTIONS EFFECT ON ELEVON HINGE MOM., NOMINAL POWER ON

(A)BETA = .00

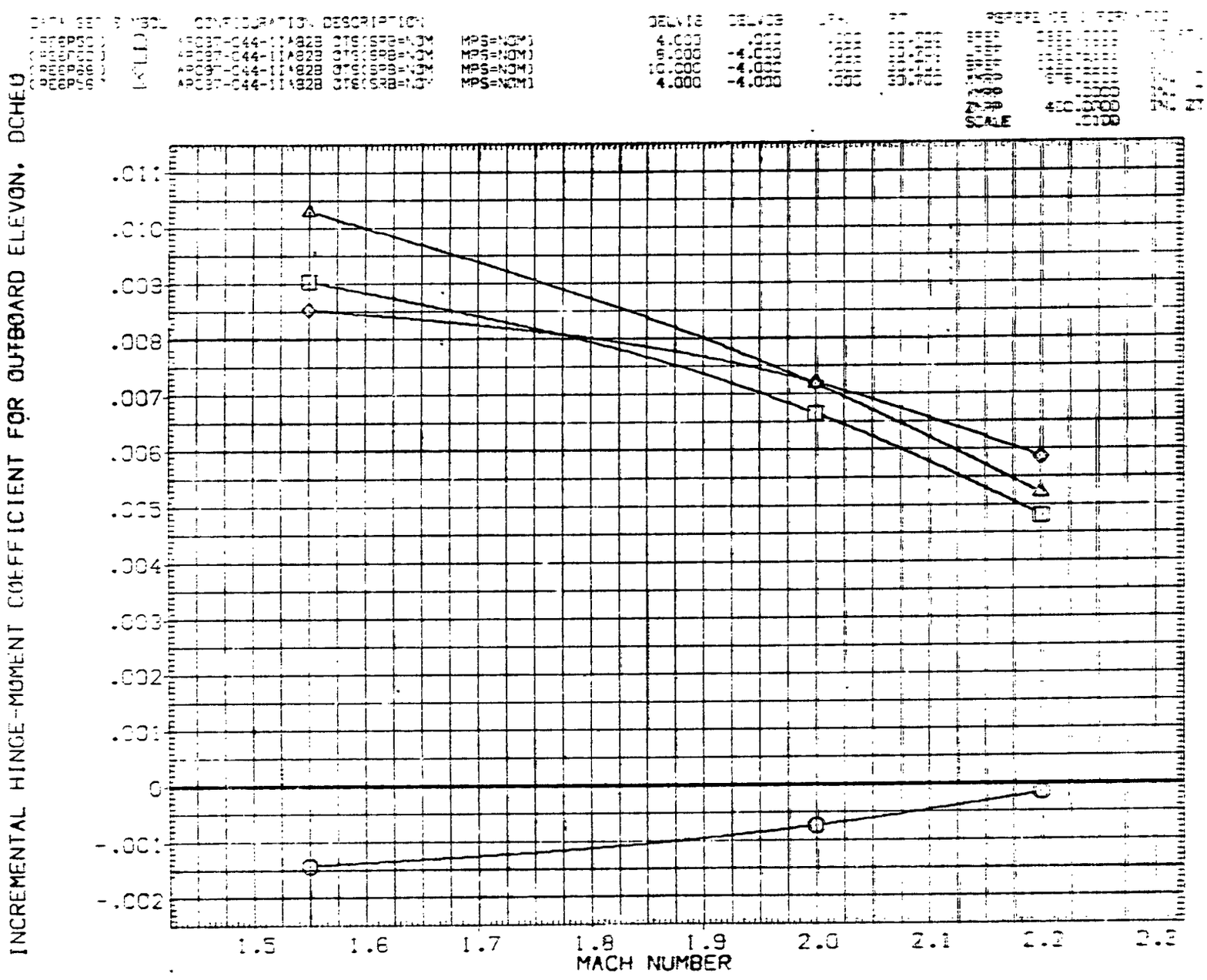


FIG.59 SUMMARY-ELEVON DEFLECTIONS EFFECT ON ELEVON HINGE MOM., NOMINAL POWER ON

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DELVIB	DELVOB	ALPHA	PT
(PE6P30)	□	ARC97-044-11A828 OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700
(PE6P29)	△	ARC97-044-11A828 OTS(SRB=NOM- MPS=NOM)	.000	.000	.000	30.700
(RE6P31)	◇	ARC97-044-11A828 OTS(SRB=NOM+ MPS=NOM)	.000	.000	.000	30.700
(RE6P32)	○	ARC97-044-11A828 OTS(SRB=NOM++ MPS=NOM)	.000	.000	.000	30.700
(RE6P33)	▽	ARC97-044-11A828 OTS(SRB=NOM MPS=NOM-)	.000	.000	.000	30.700
(RE6P34)	◁	ARC97-044-11A828 OTS(SRB=NOM MPS=NOM+)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2697.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

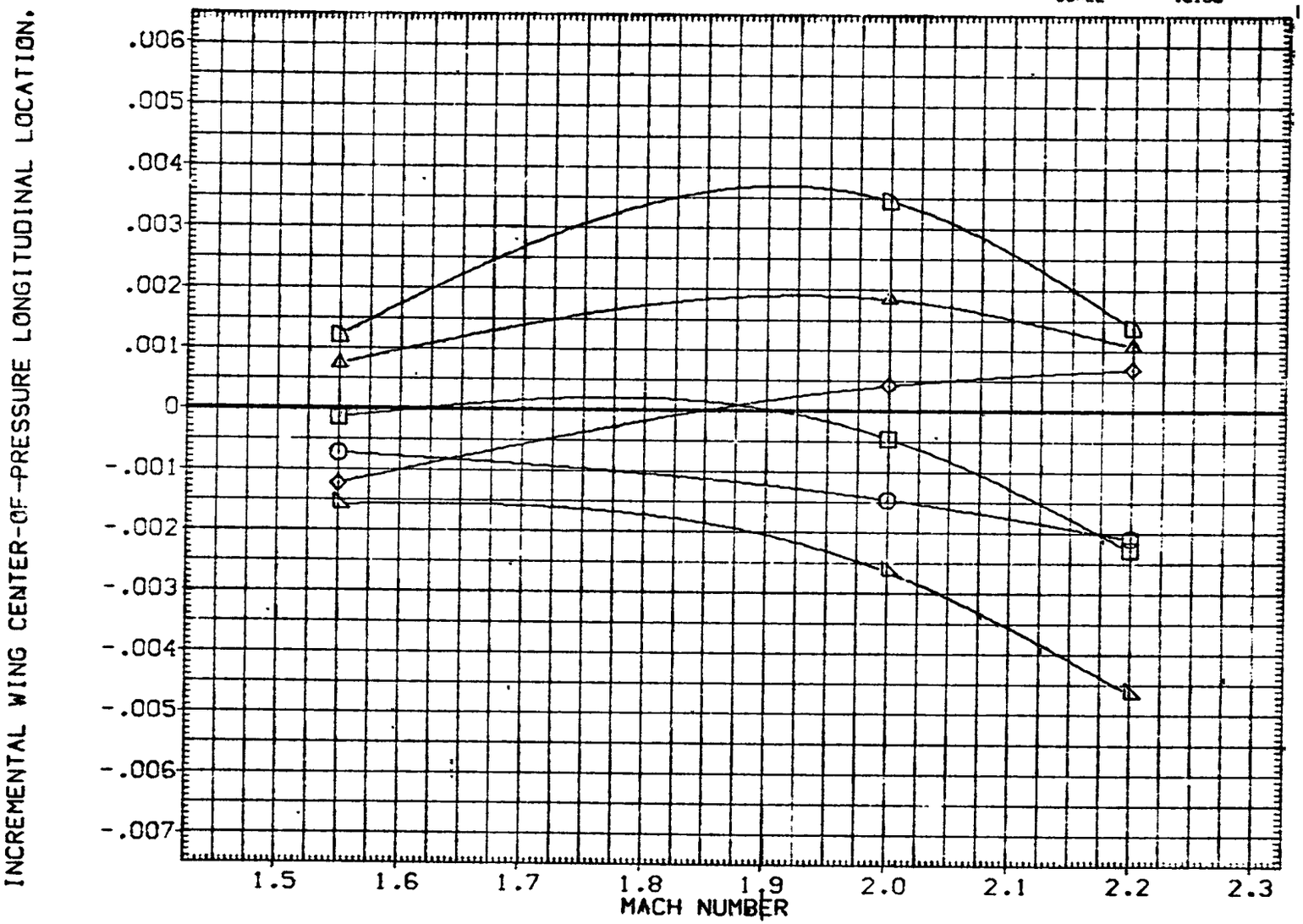


FIG.60 SUMMARY-MPS/SRB PLUME EFFECT ON WING CENTER-OF-PRESSURE

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		DELVIB	DELVOB	ALPHA	PT	REFERENCE INFORMATION		
(RE6P30)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700	SREF	2690.0000	SQ.FT
(RE6P29)		ARC97-044-11A82B OTS(SRB=NOM-	MPS=NOM)	.000	.000	.000	30.700	LREF	1290.3000	IN.
(RE6P31)		ARC97-044-11A82B OTS(SRB=NOM+	MPS=NOM)	.000	.000	.000	30.700	BREF	1290.3000	IN.
(RE6P32)		ARC97-044-11A82B OTS(SRB=NOM++	MPS=NOM)	.000	.000	.000	30.700	XMRP	976.0000	IN.
(RE6P33)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM-)	.000	.000	.000	30.700	YMRP	.0000	IN.
(RE6P34)		ARC97-044-11A82B OTS(SRB=NOM	MPS=NOM+)	.000	.000	.000	30.700	ZMRP	400.0000	IN. CT
								SCALE	.0100	

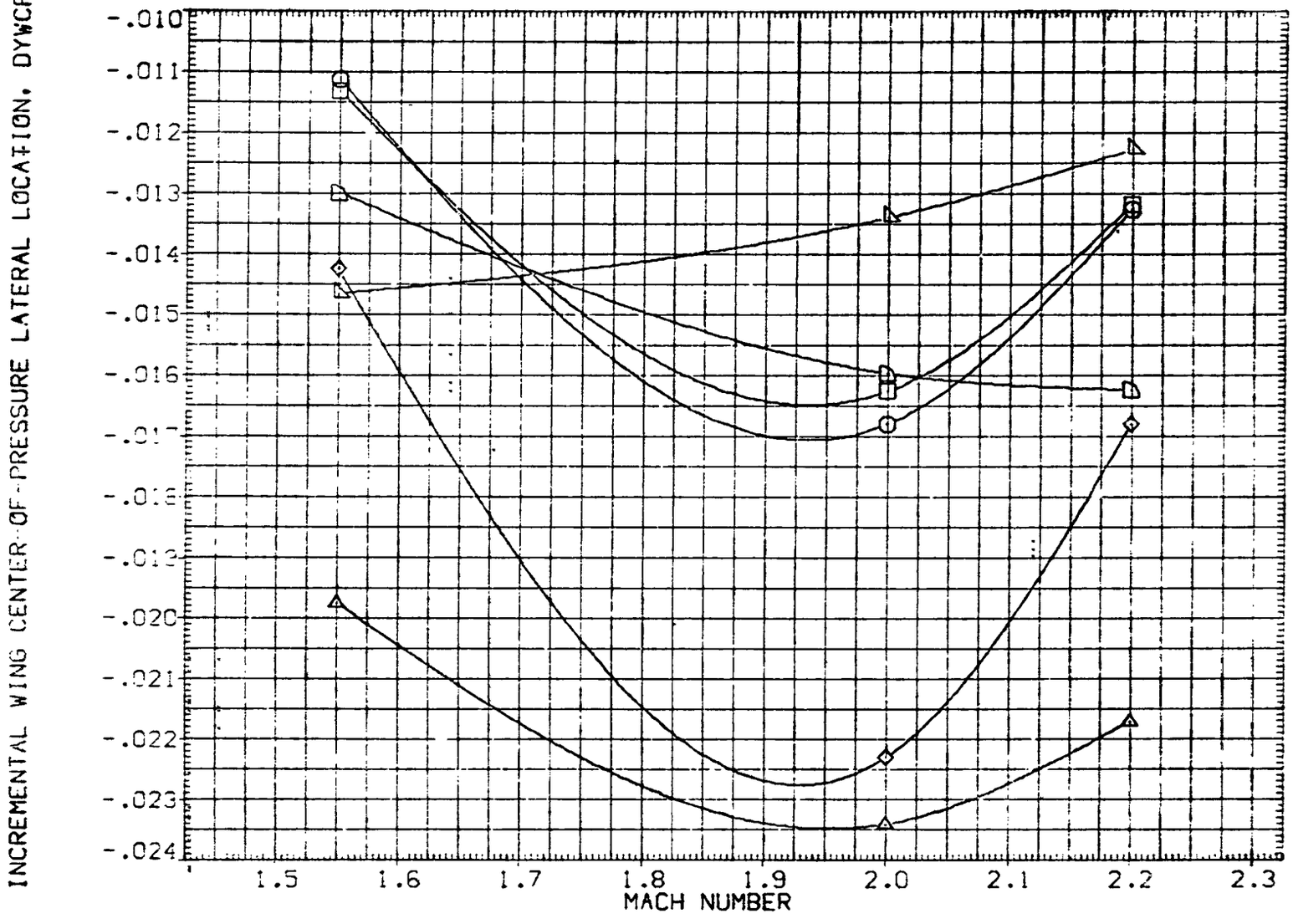


FIG.60 SUMMARY-MPS/SRB PLUME EFFECT ON WING CENTER-OF-PRESSURE

(A)BETA = .00

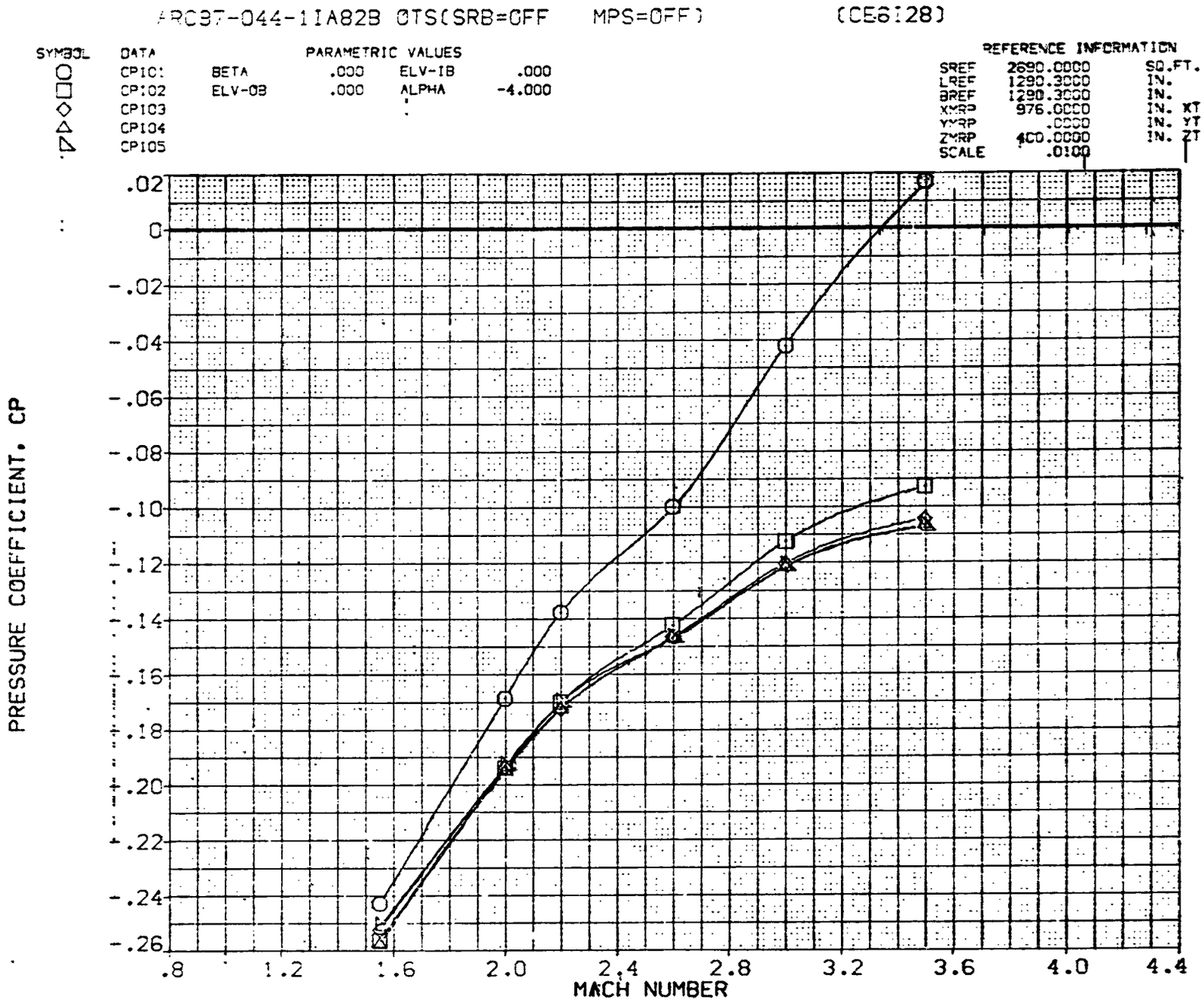


FIG. 61 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=OFF, MPS=OFF

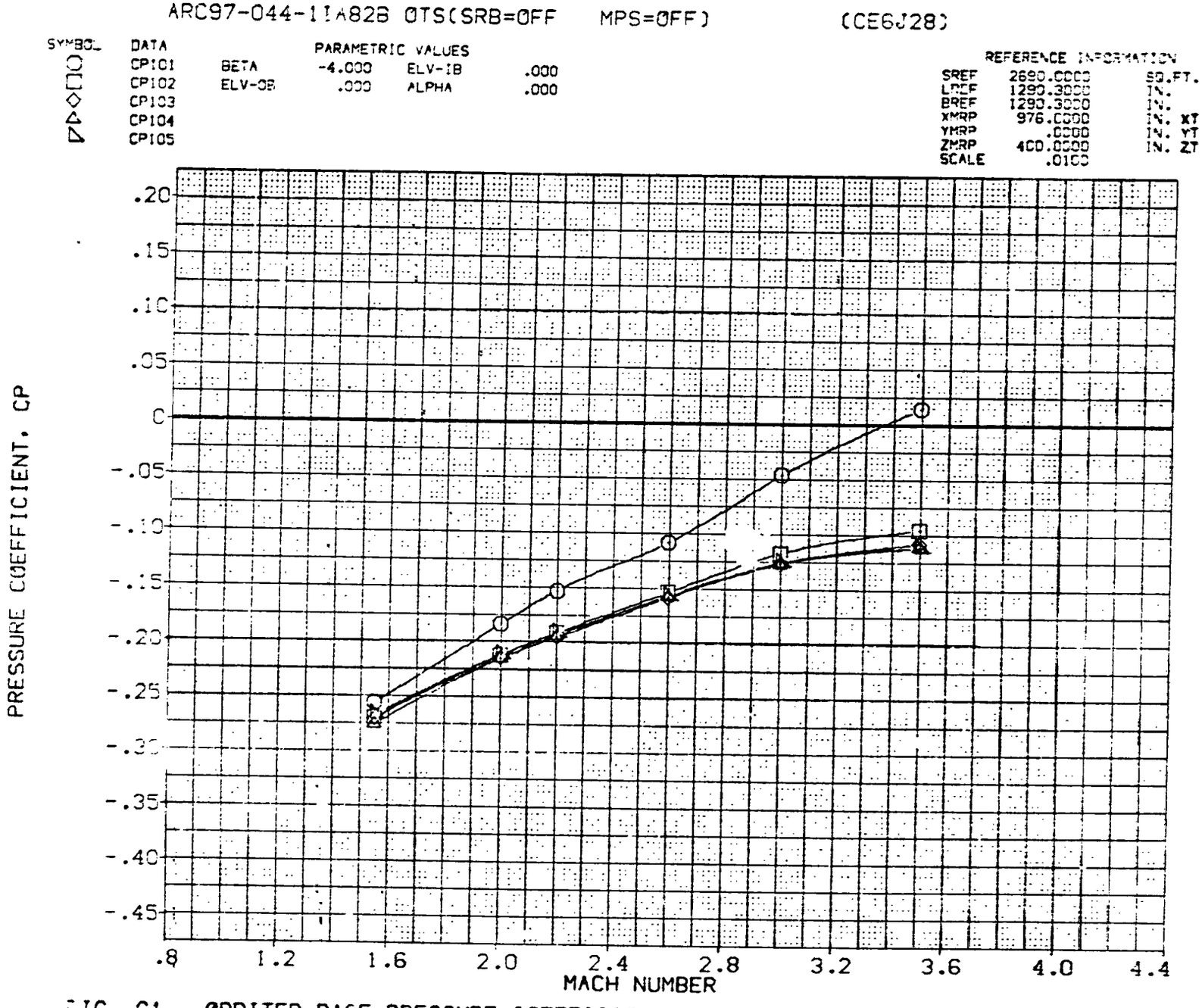


FIG. 61 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=OFF, MPS=OFF

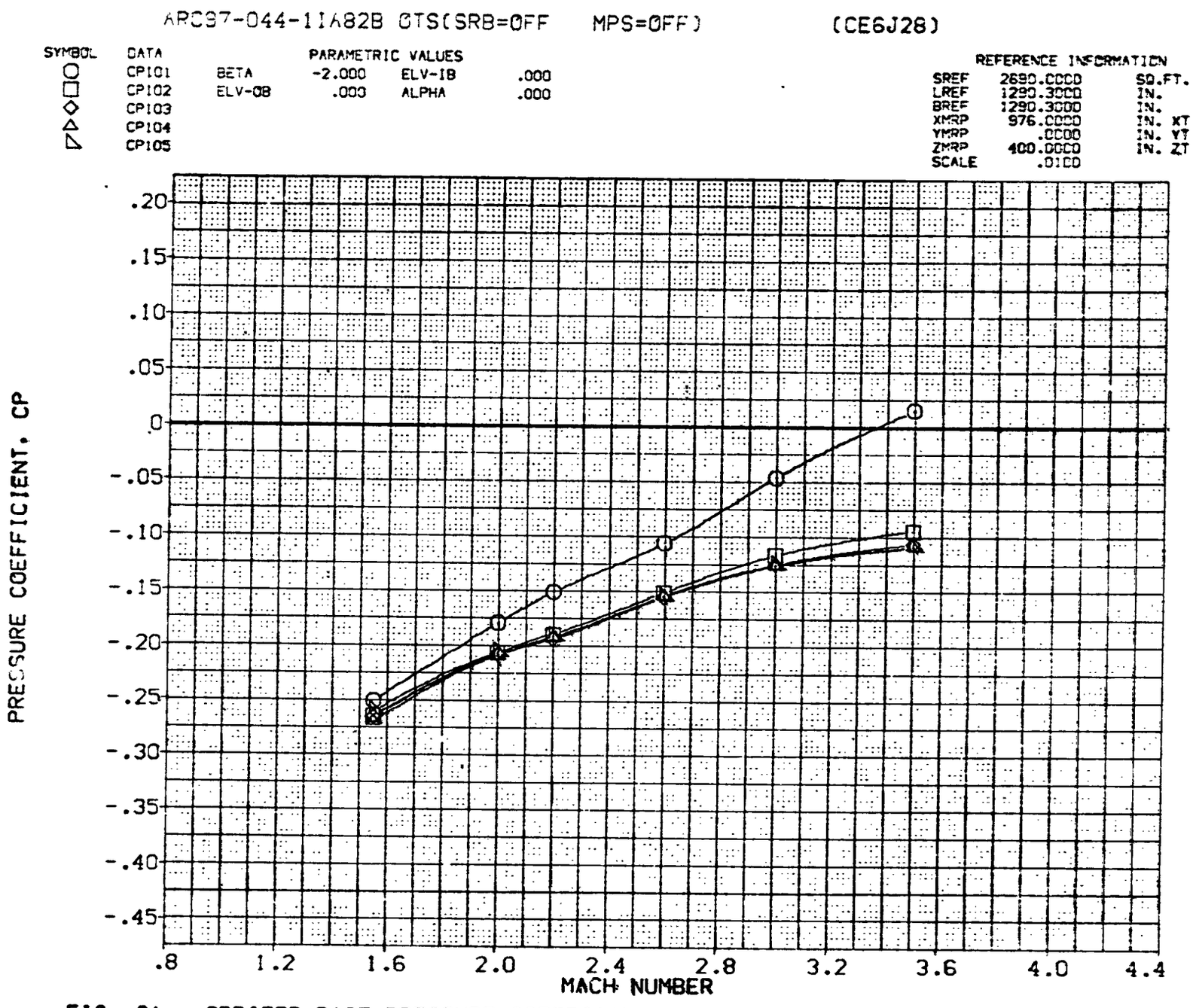


FIG. 61 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=OFF, MPS=OFF

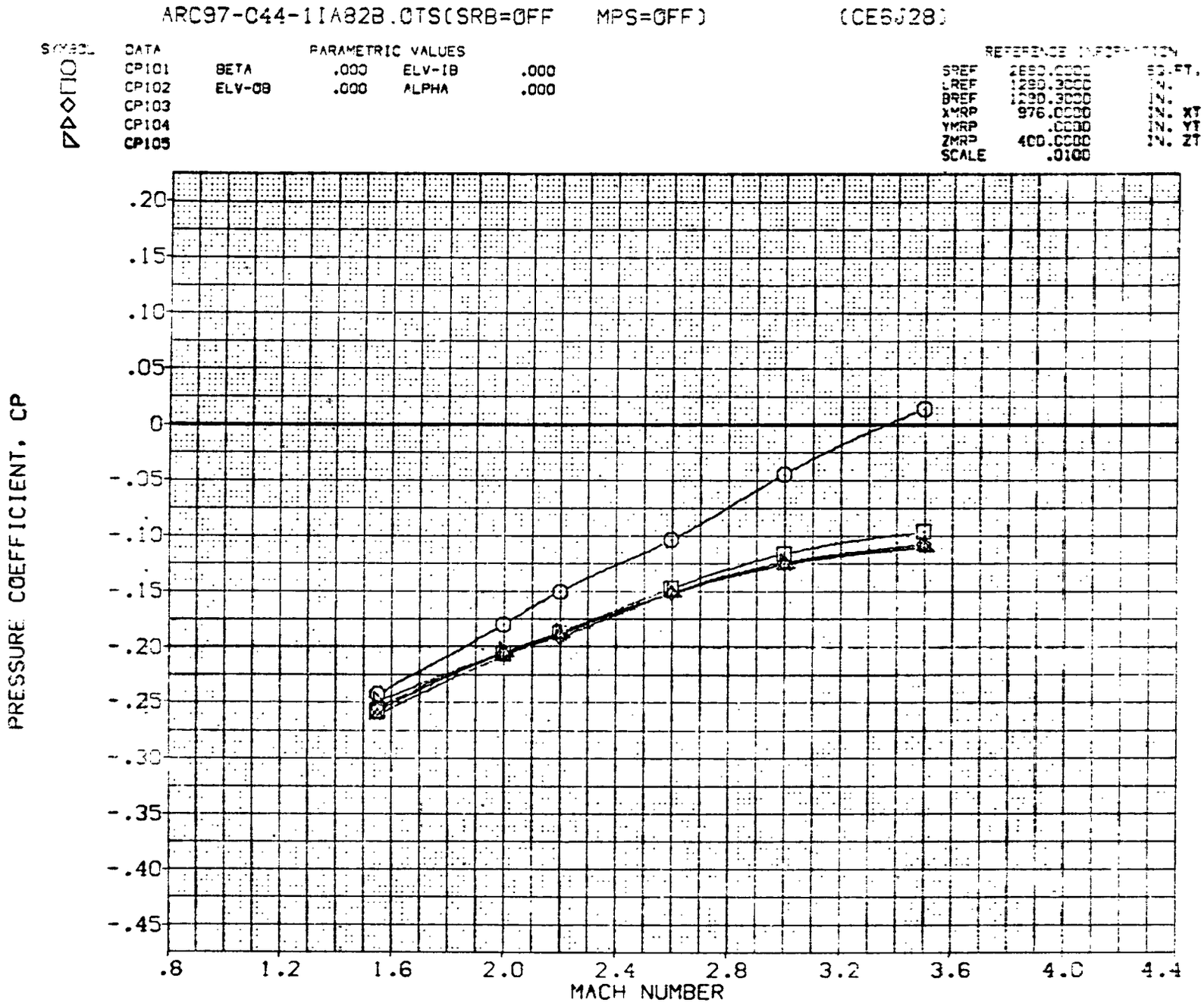


FIG. 61 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=OFF, MPS=OFF

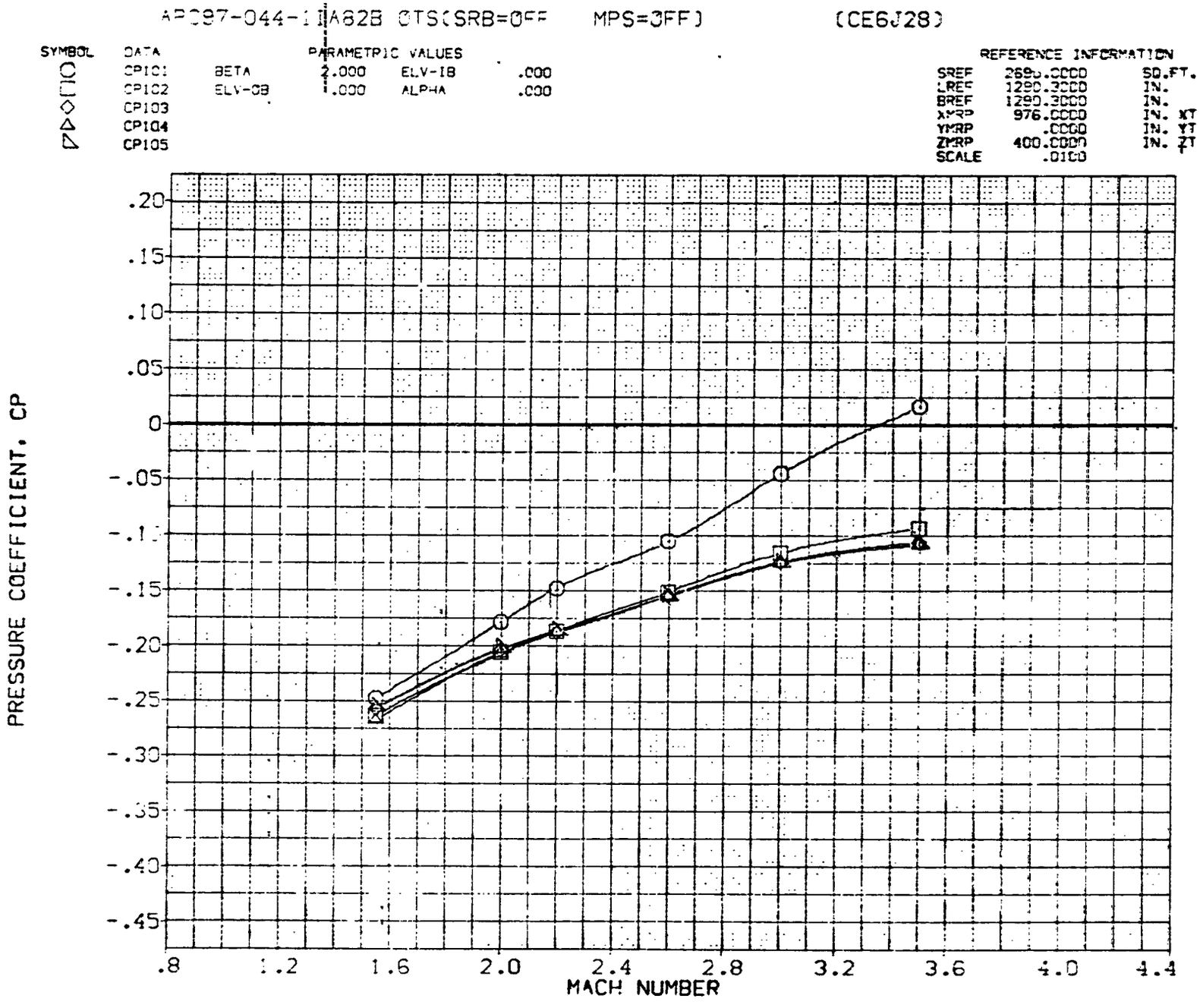


FIG. 61 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=0FF, MPS=0FF

APC37-044-11A82B OTS(SRB=OFF MPS=OFF) (CESJ28)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP101	BETA	4.000	ELV-IB	.000
□	CP102	ELV-03	.000	ALPHA	.000
◇	CP103				
△	CP104				
▽	CP105				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

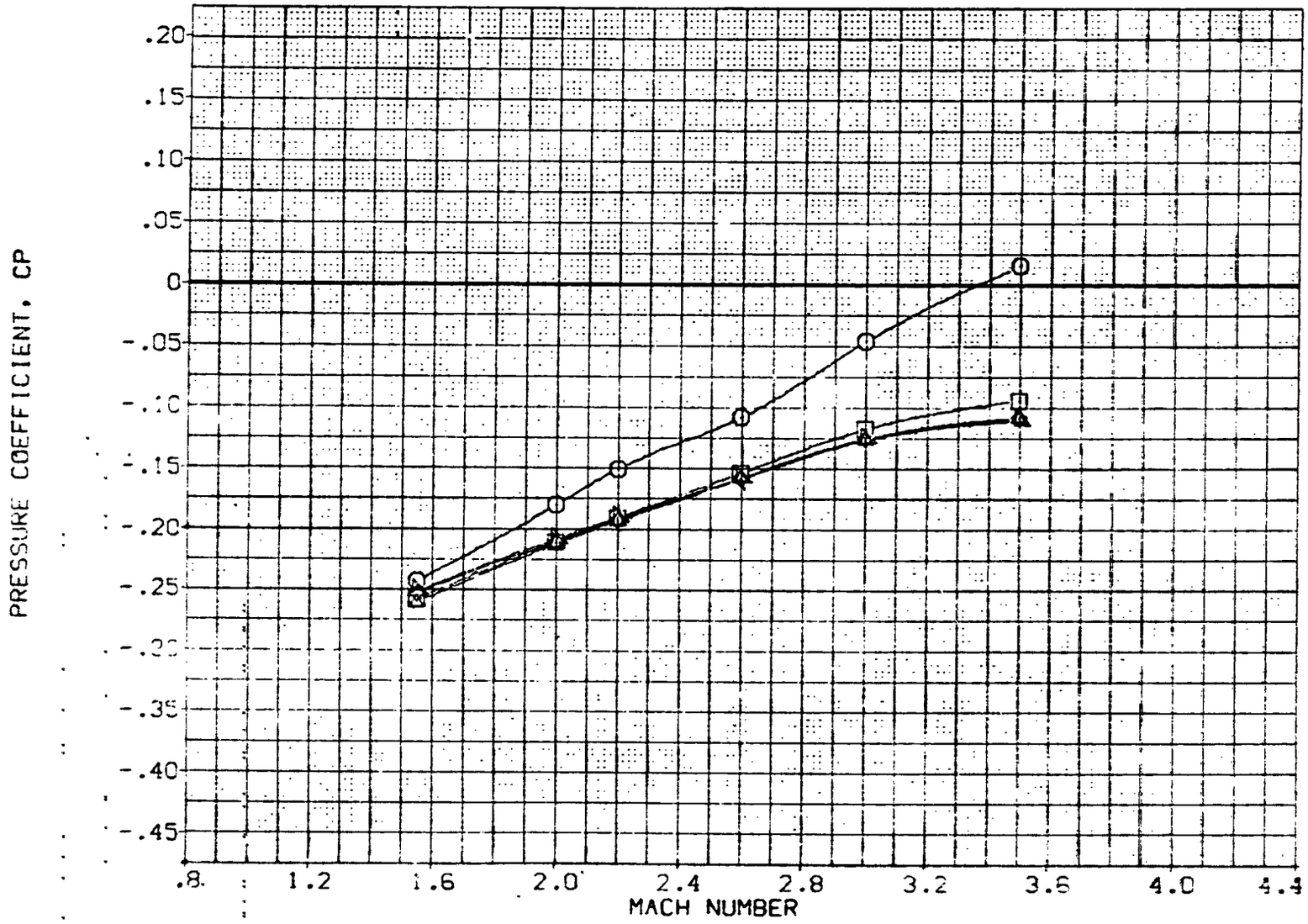


FIG. 61 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=OFF, MPS=OFF

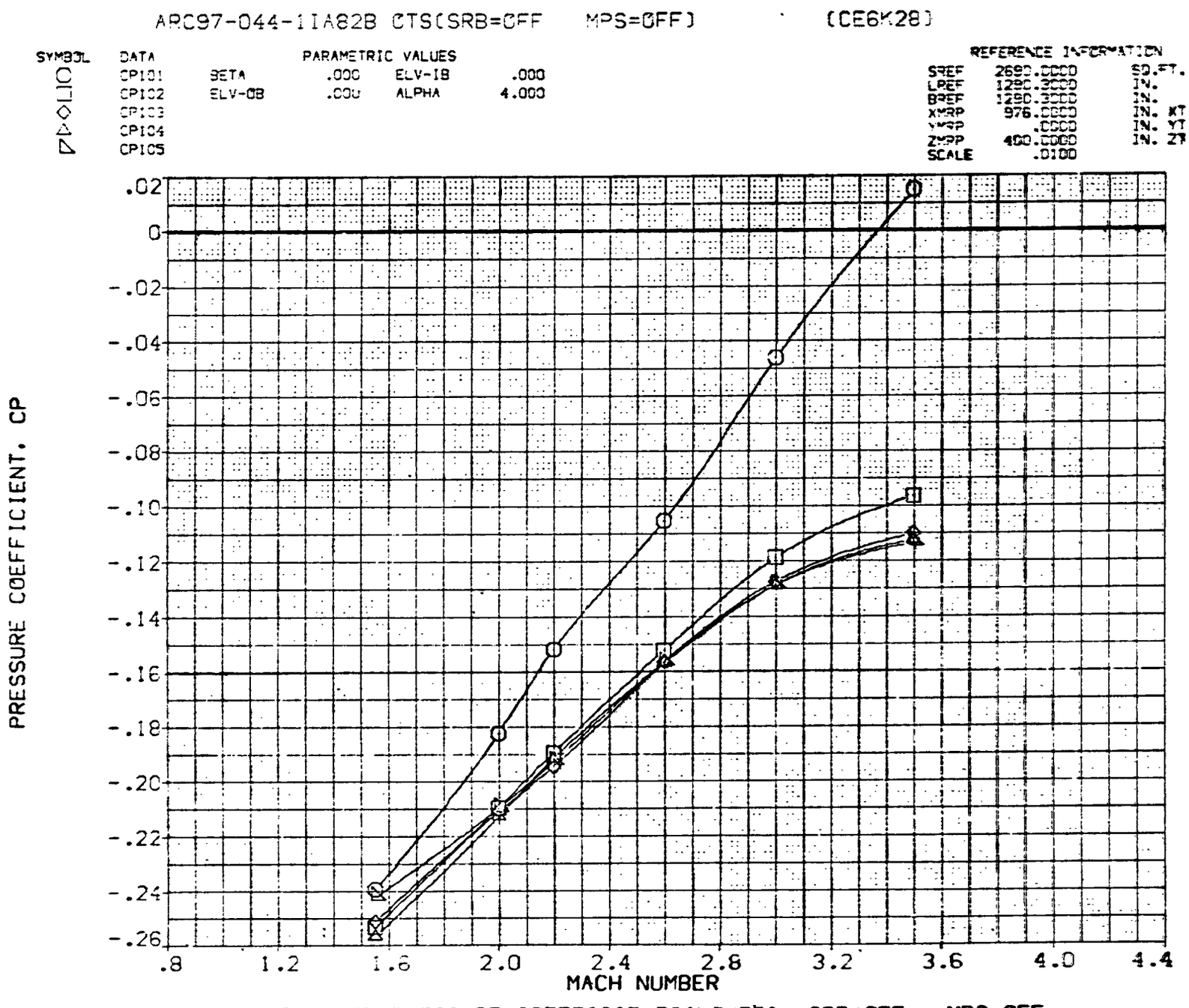


FIG. 61 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=OFF, MPS=OFF

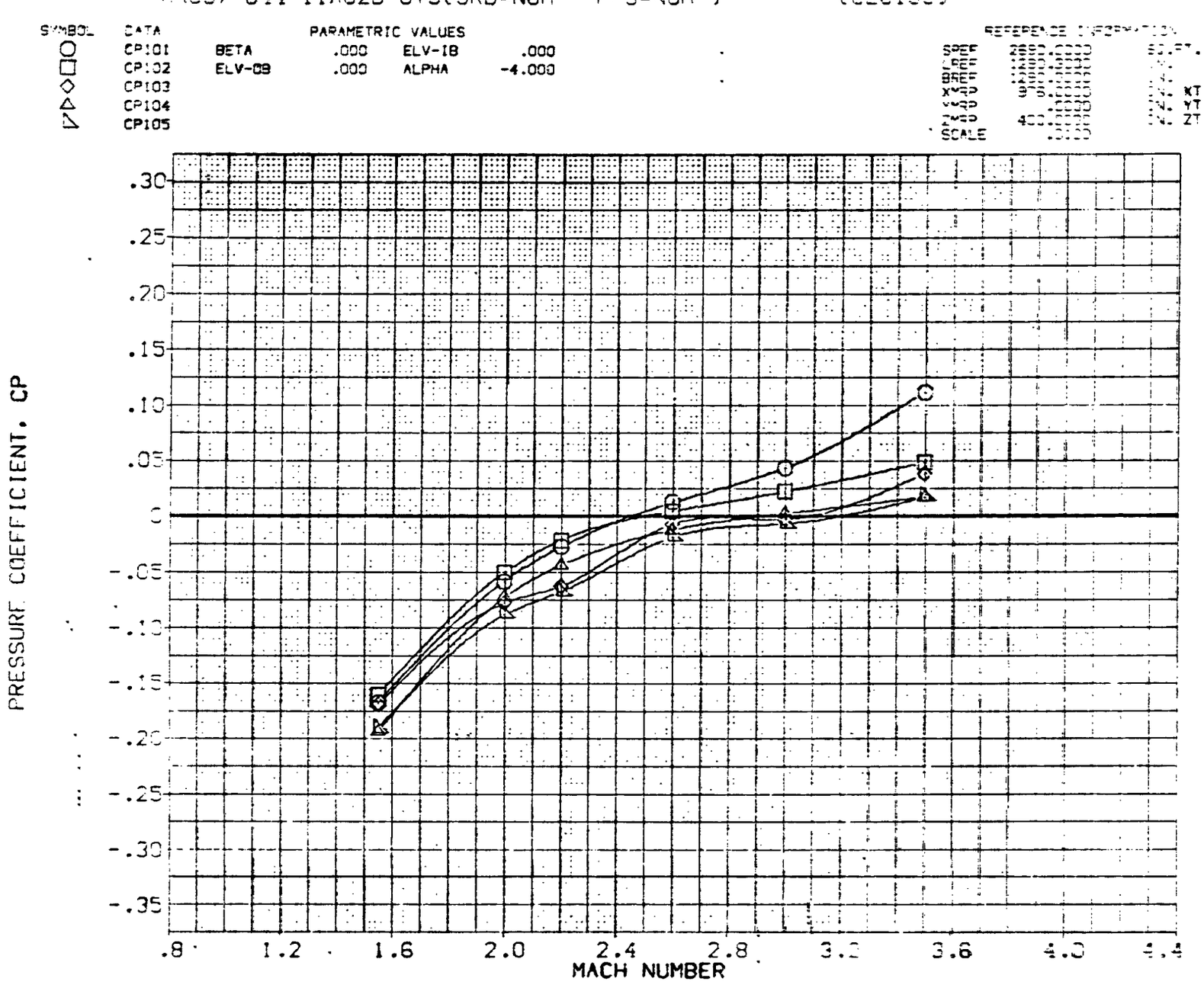


FIG. 62 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM-

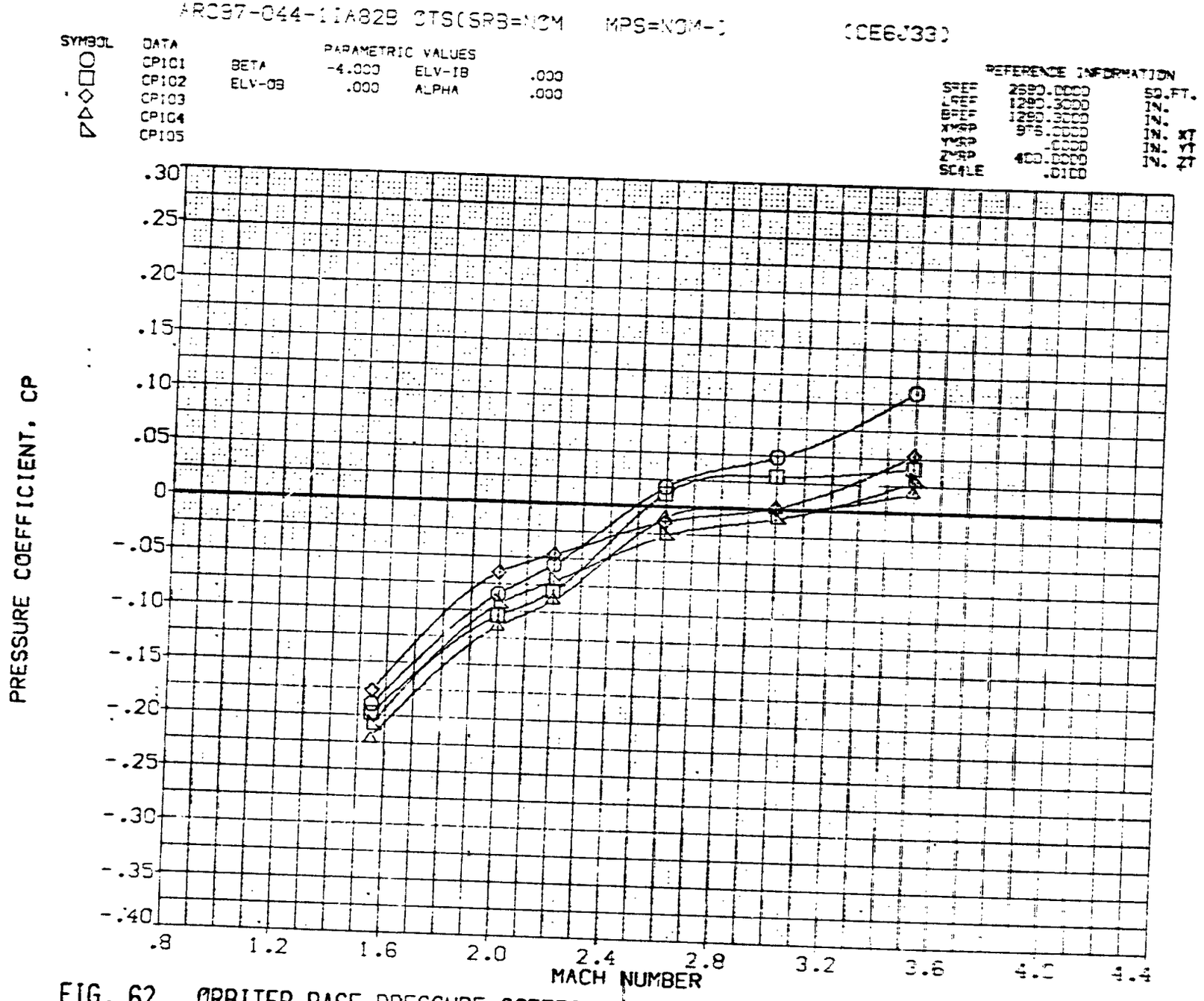


FIG. 62 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM-

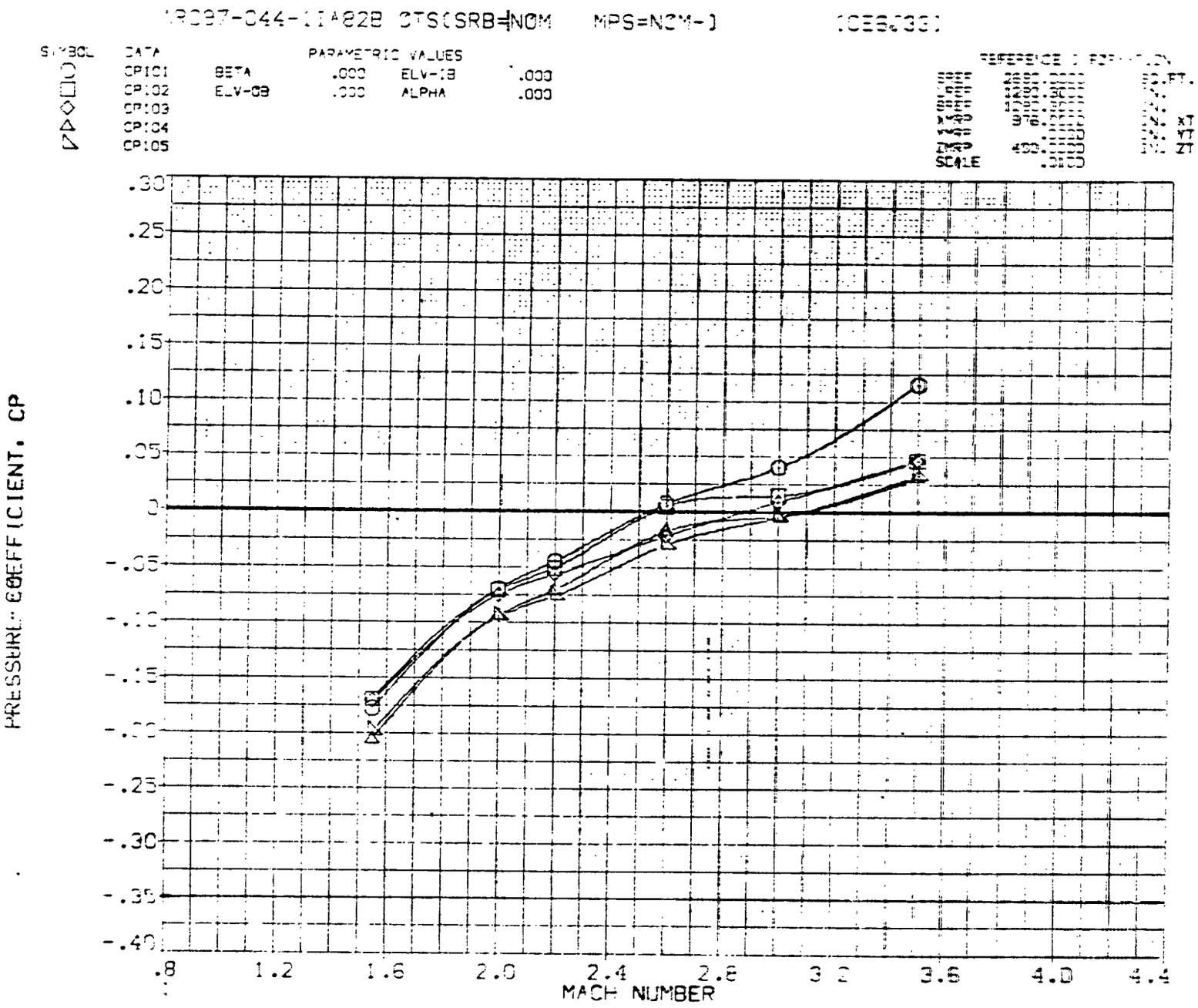


FIG. 62 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM-

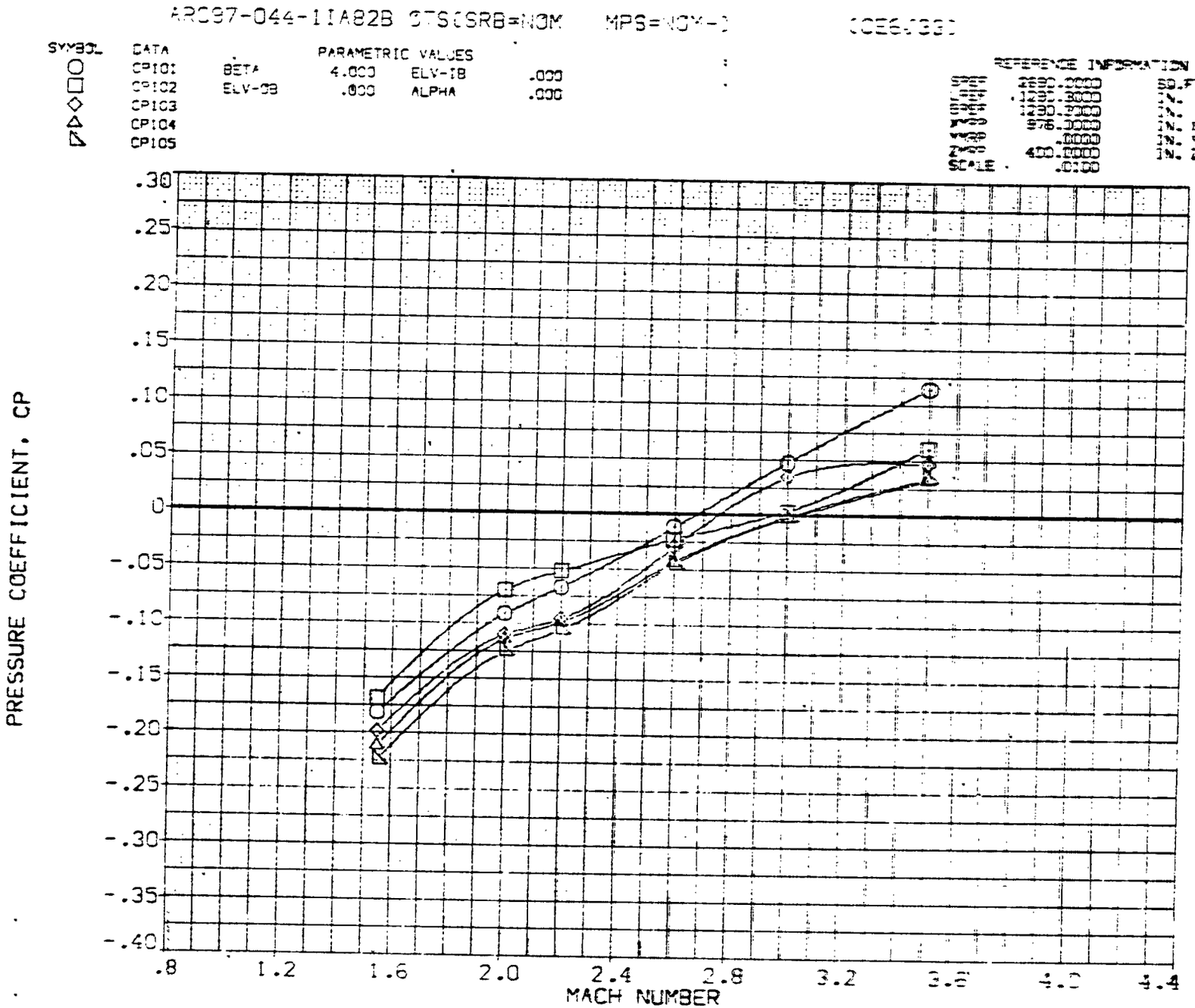


FIG. 62 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM-

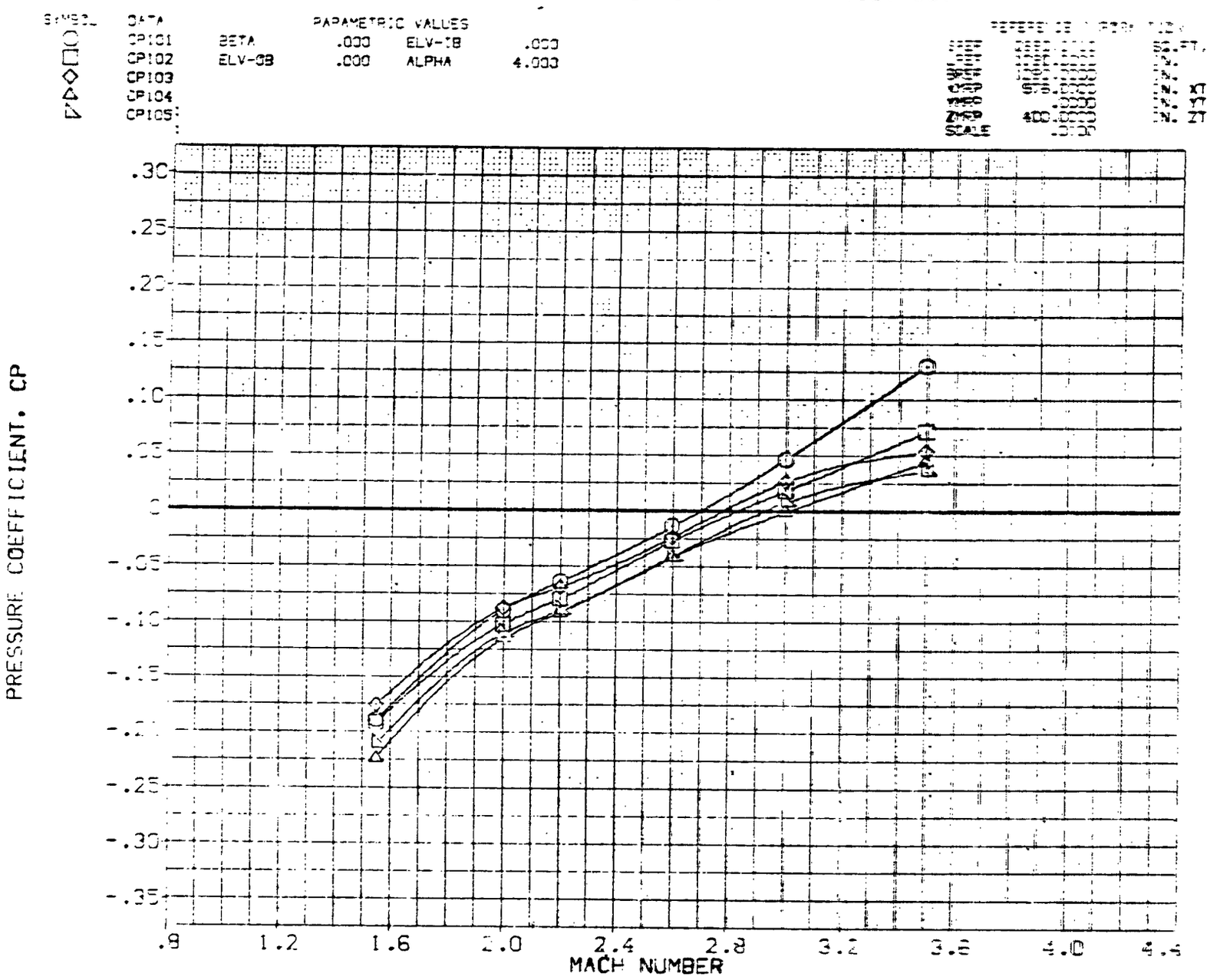


FIG. 62 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM.

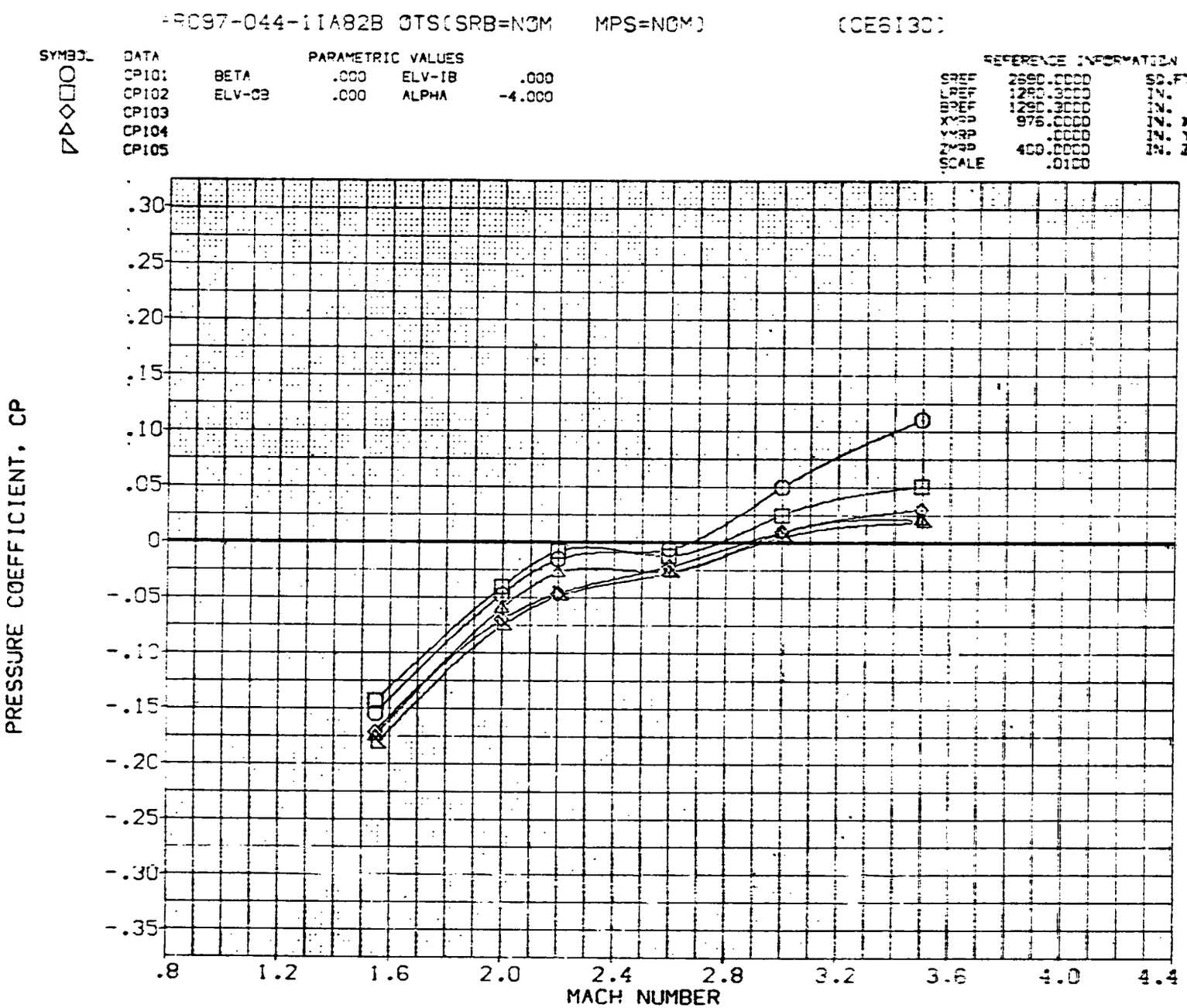


FIG. 63 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM

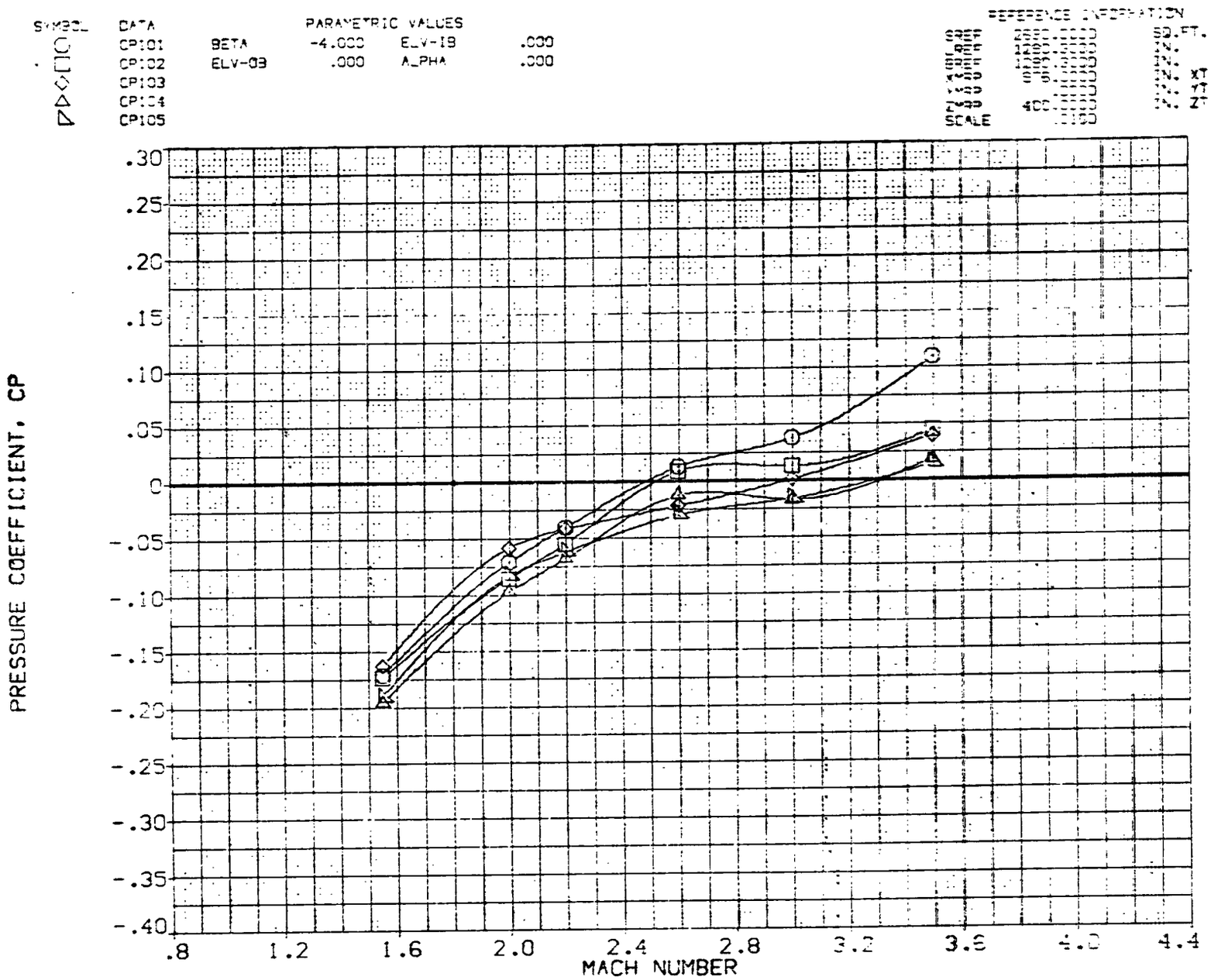


FIG. 63 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM

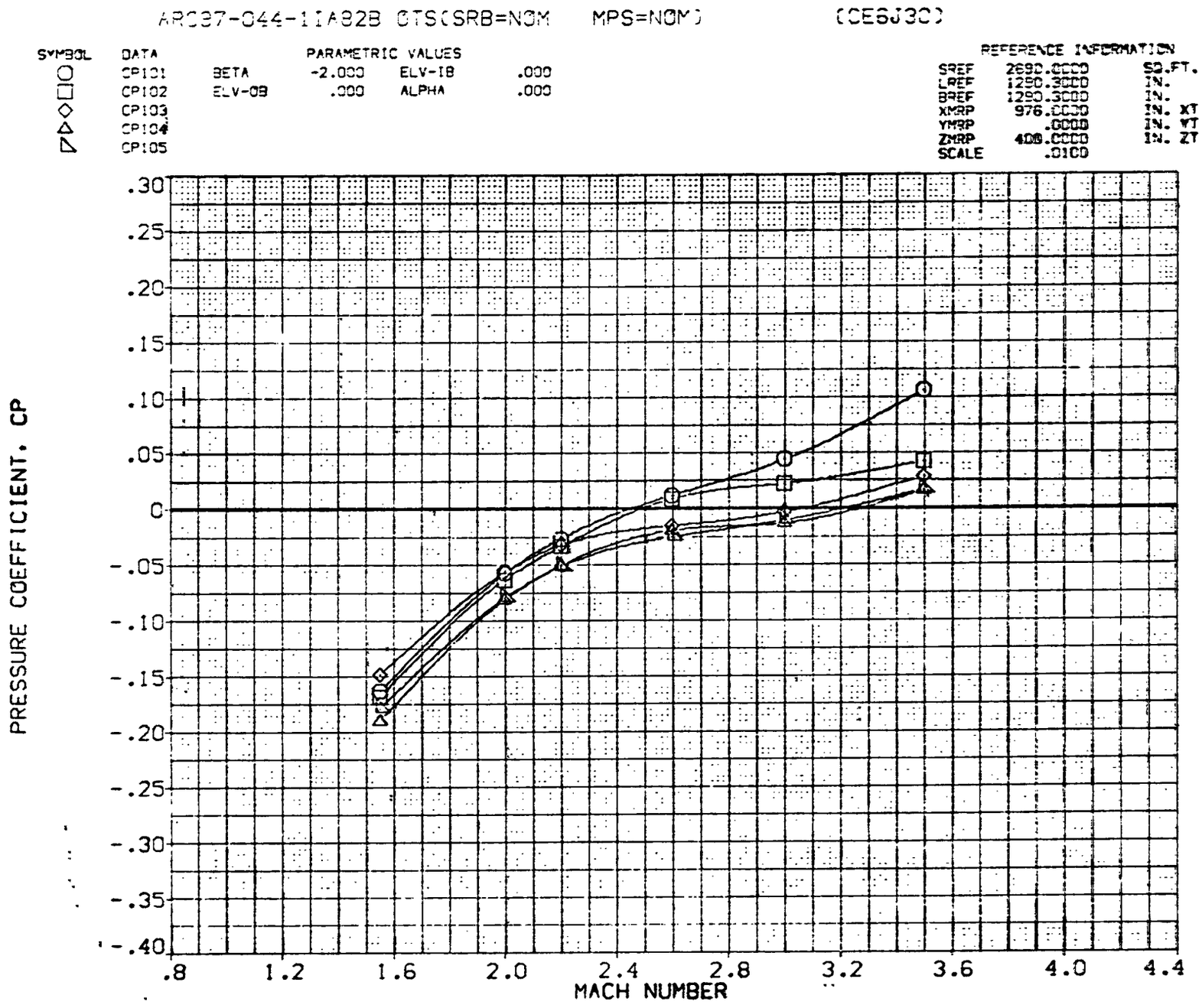


FIG. 63 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM

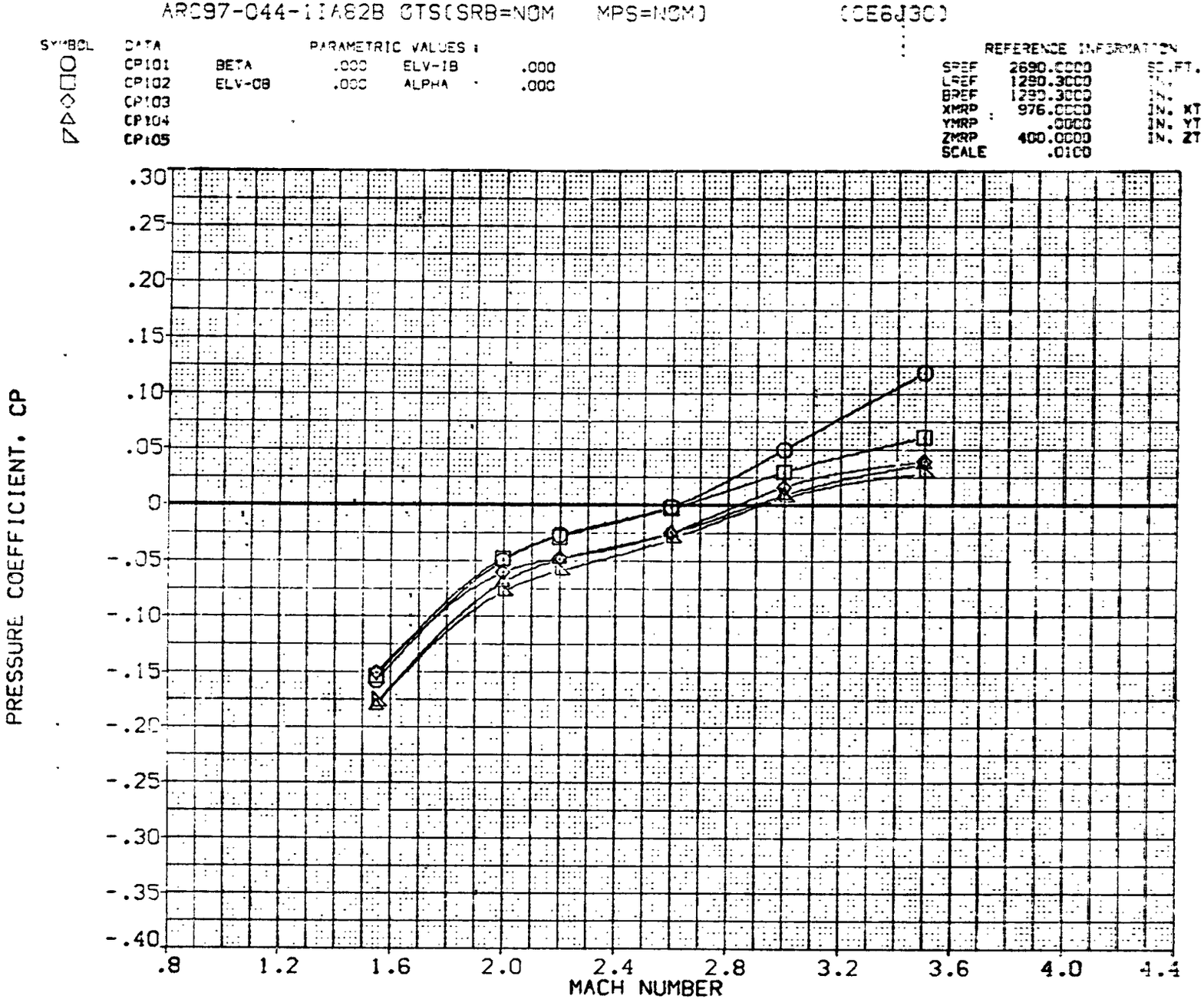


FIG. 63 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM

AR037-044-11A82B OTS(SRB=NOM MPS=NOM) (CE6J30)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP101	BETA	2.000	ELV-IB	.000
□	CP102	ELV-OB	.000	ALPHA	.000
◇	CP103				
△	CP104				
◁	CP105				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

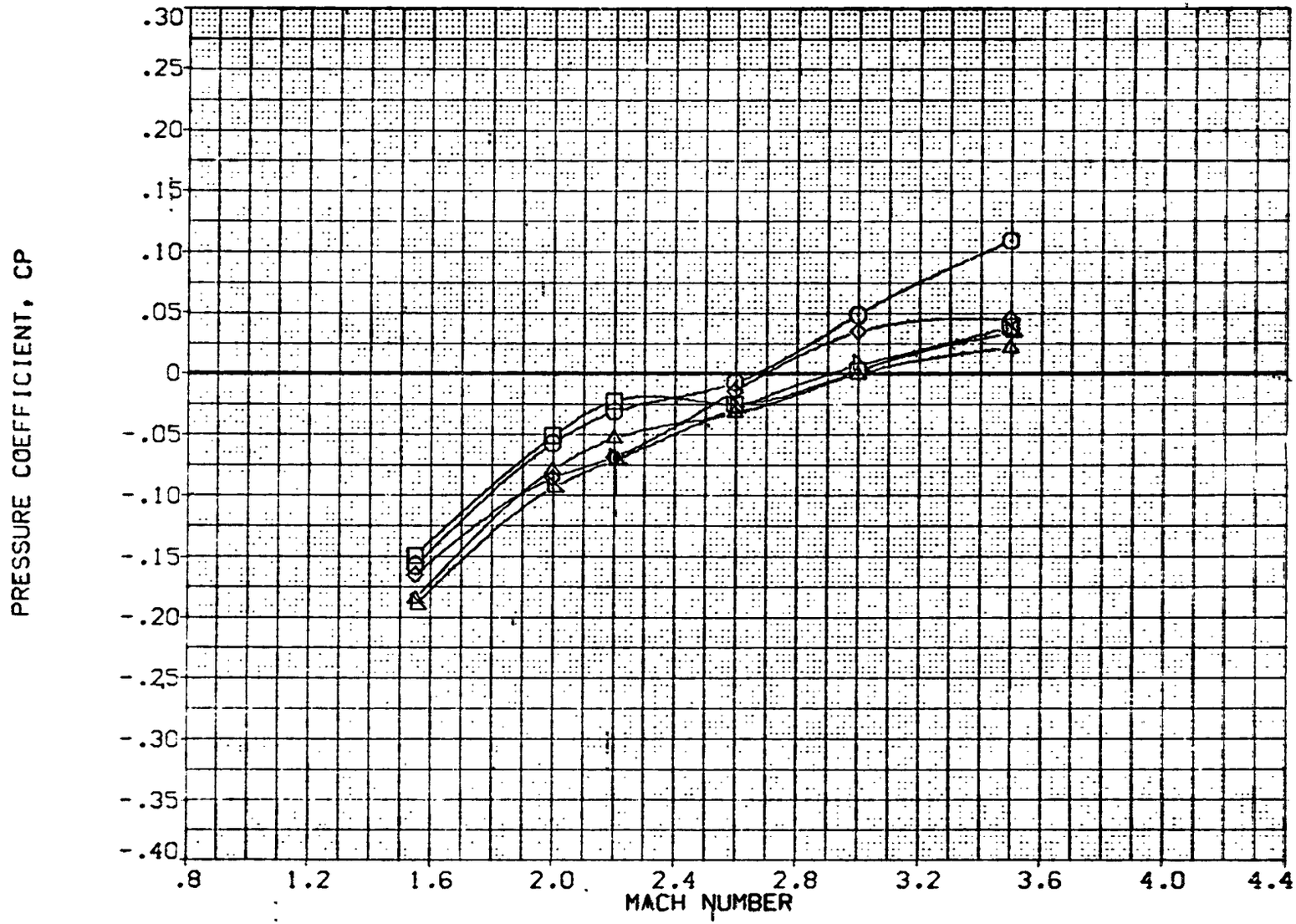


FIG. 63 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM

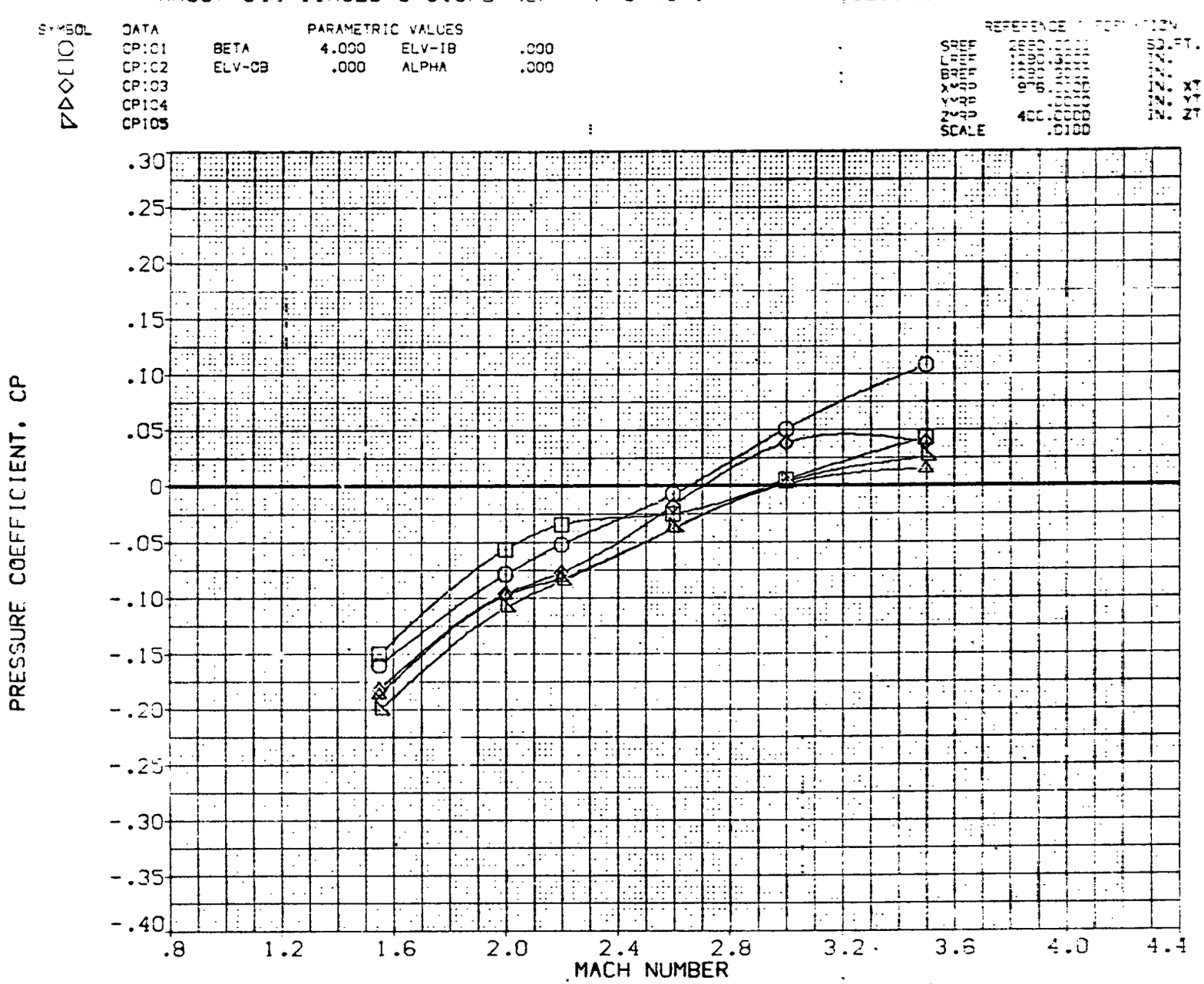


FIG. 63 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM

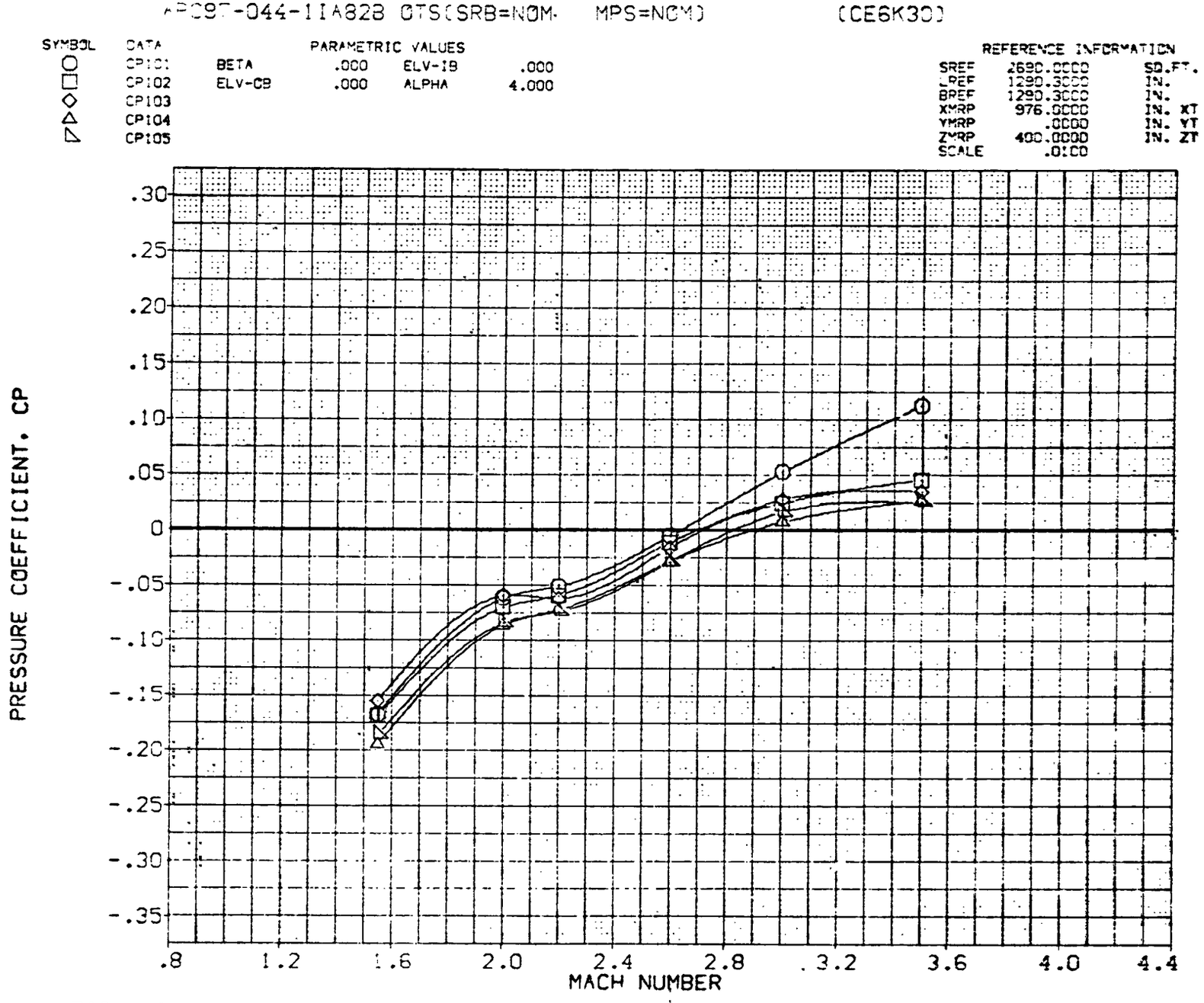


FIG. 63 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) .SRB=NOM, MPS=NOM

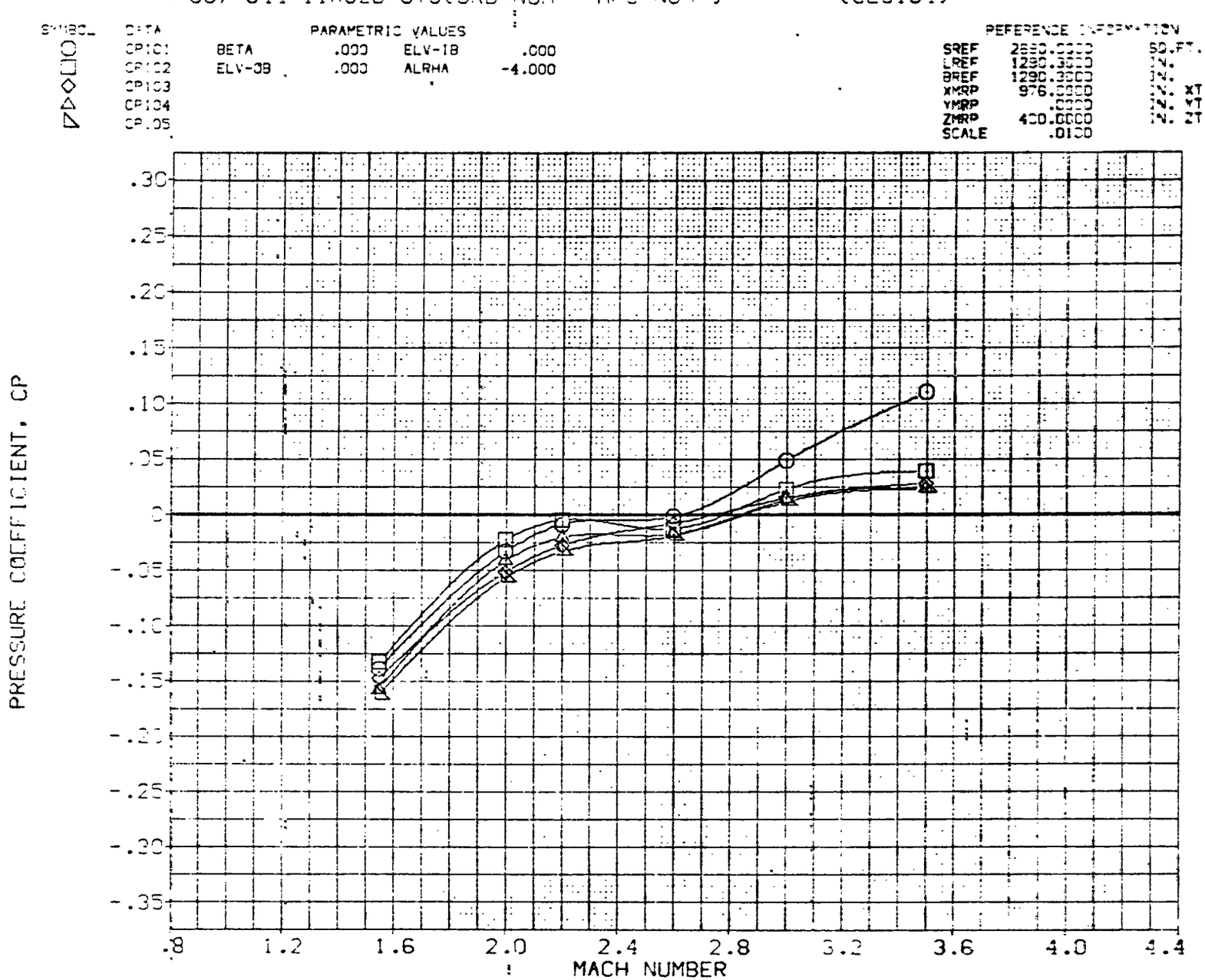


FIG. 64 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM+

ARC87-044-1IA82B OTS(SRB=NOM MPS=NOM+) (CE6J34)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP101	BETA	-4.000	ELV-IB	.000
□	CP102	ELV-OB	.000	ALPHA	.000
◇	CP103				
△	CP104				
▽	CP105				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

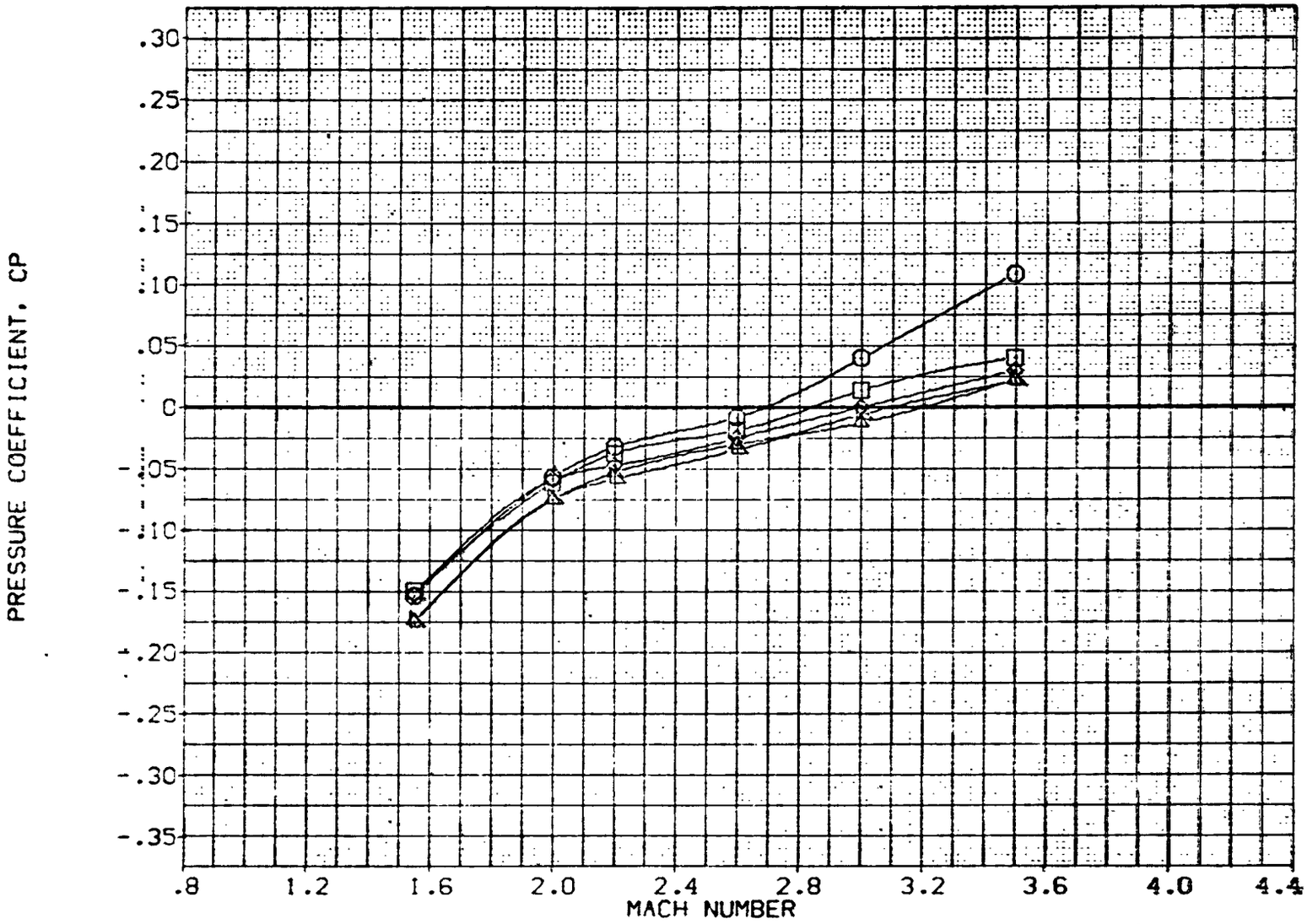


FIG. 64 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM+

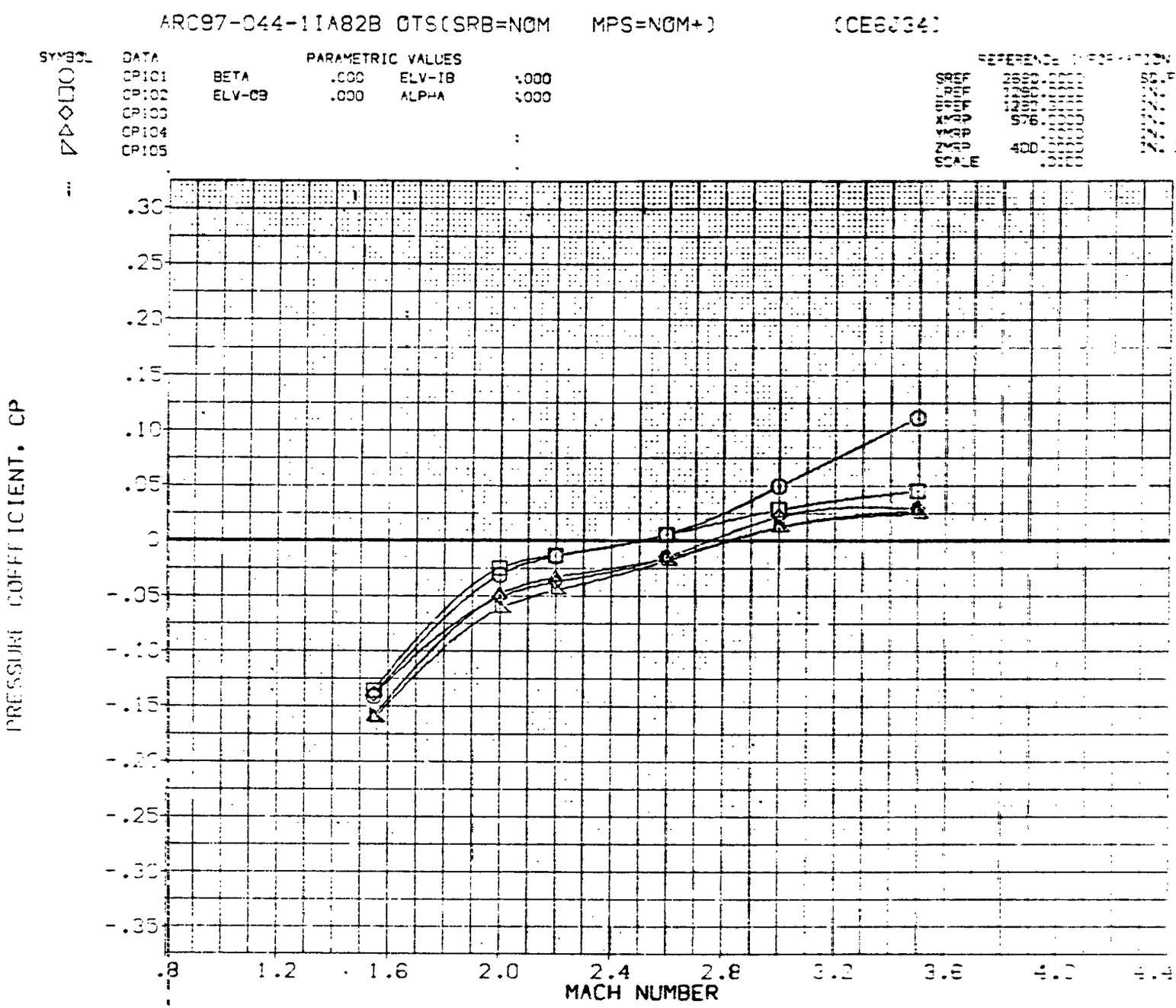


FIG. 64 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM+

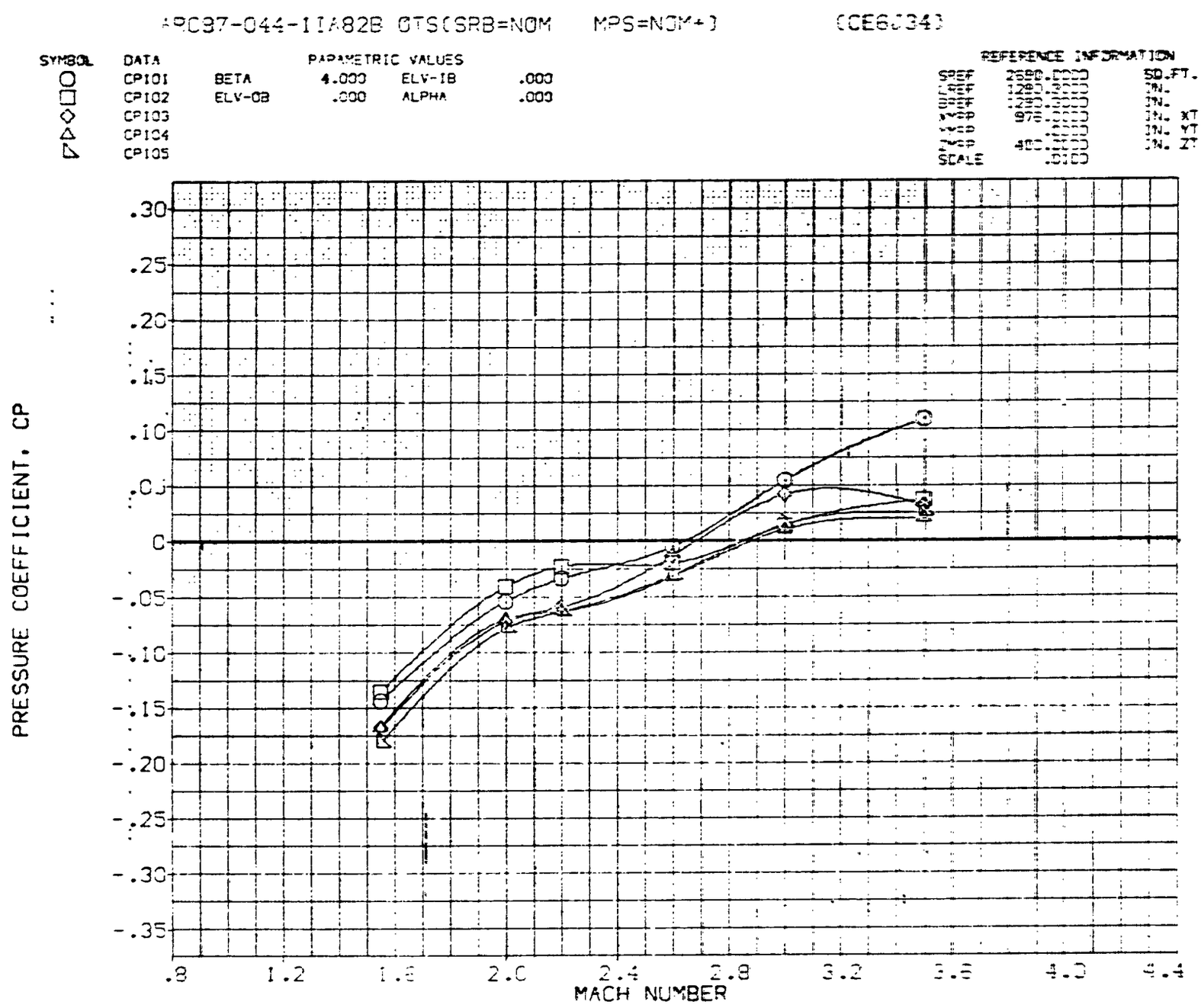


FIG. 64 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=NOM, MPS=NOM+

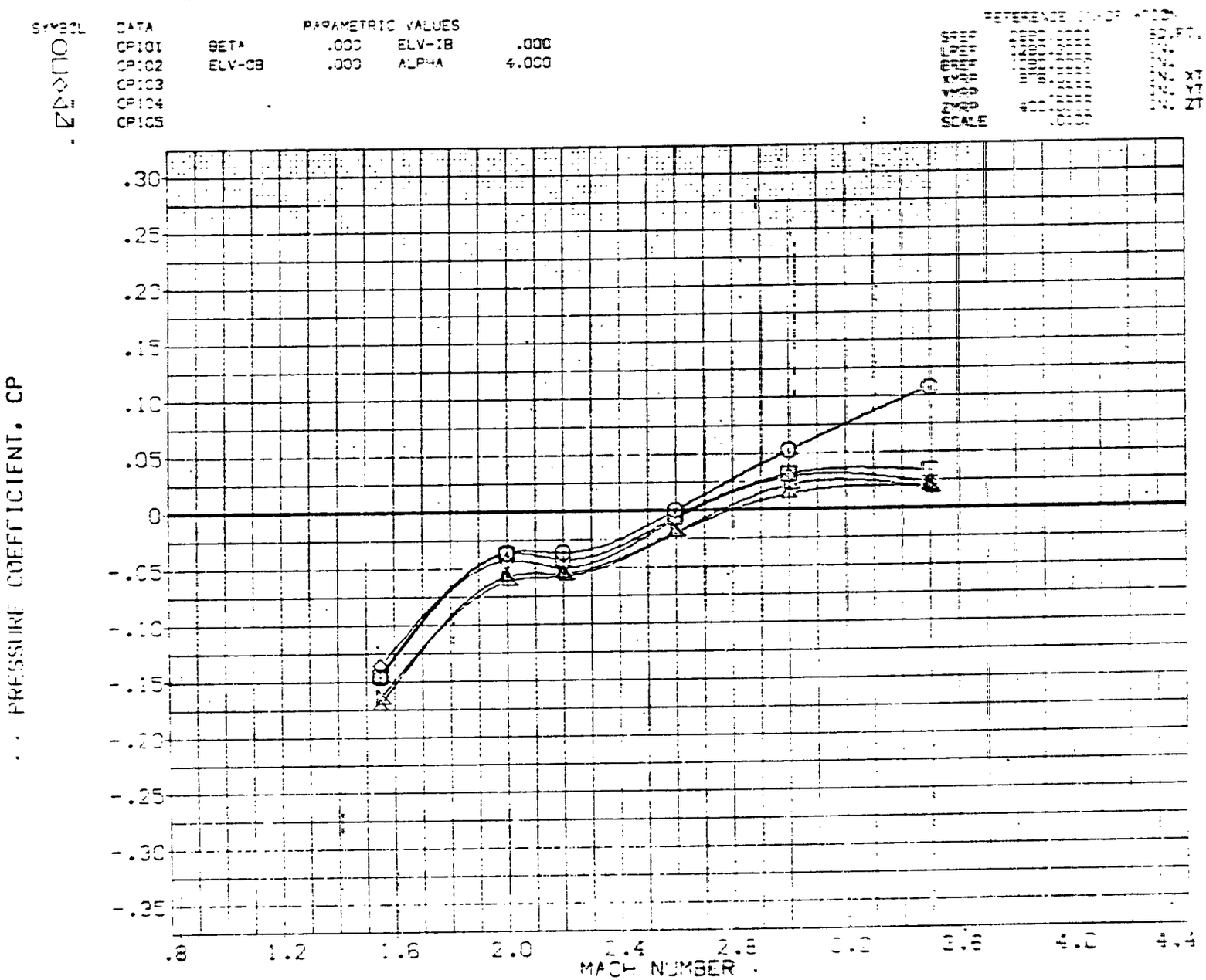


FIG. 64 ORBITER BASE PRESSURE COEFFICIENTS(LOWER) SRB=N3M. MPS=N.3M+

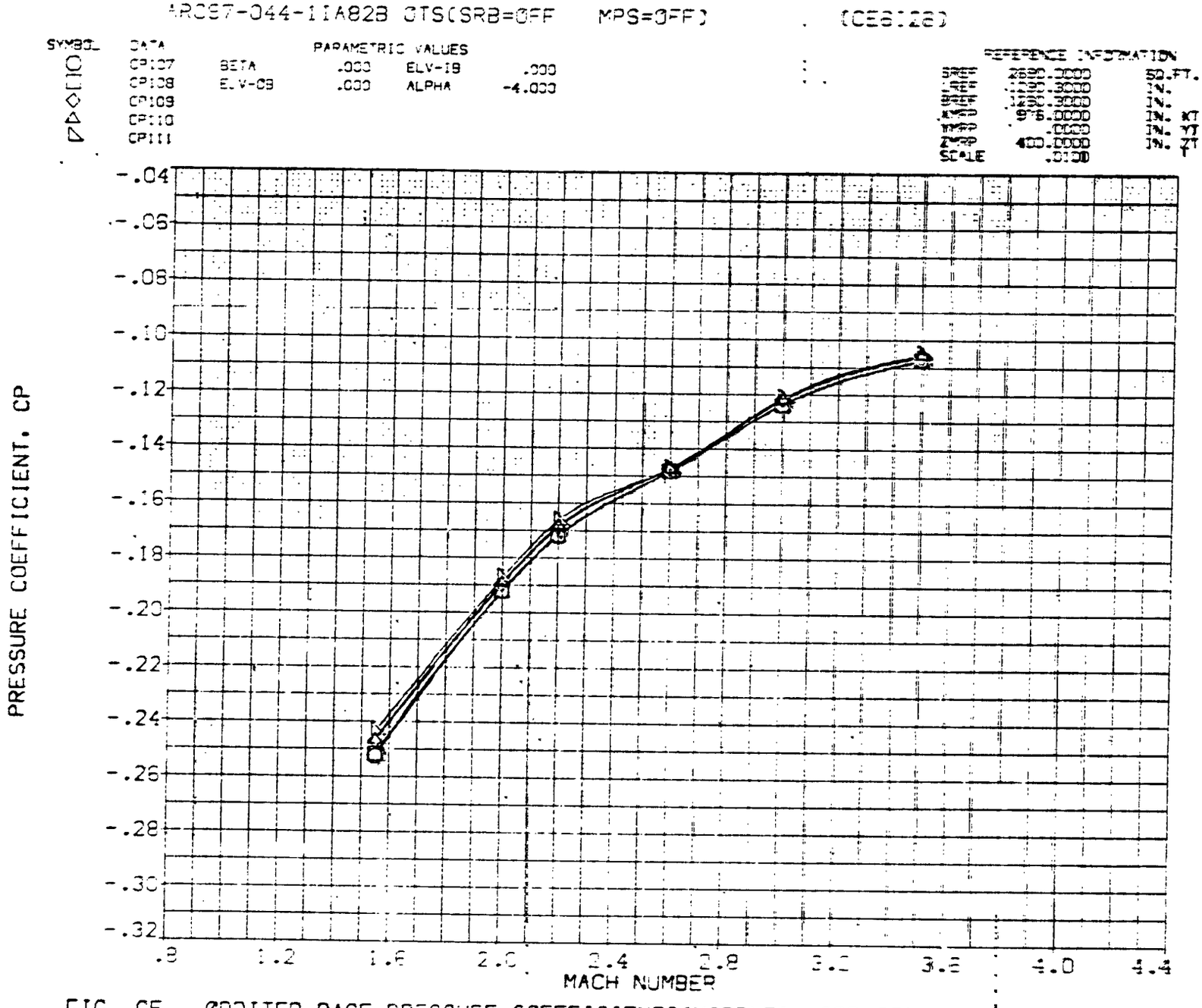


FIG. 65 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=OFF. MPS=OFF

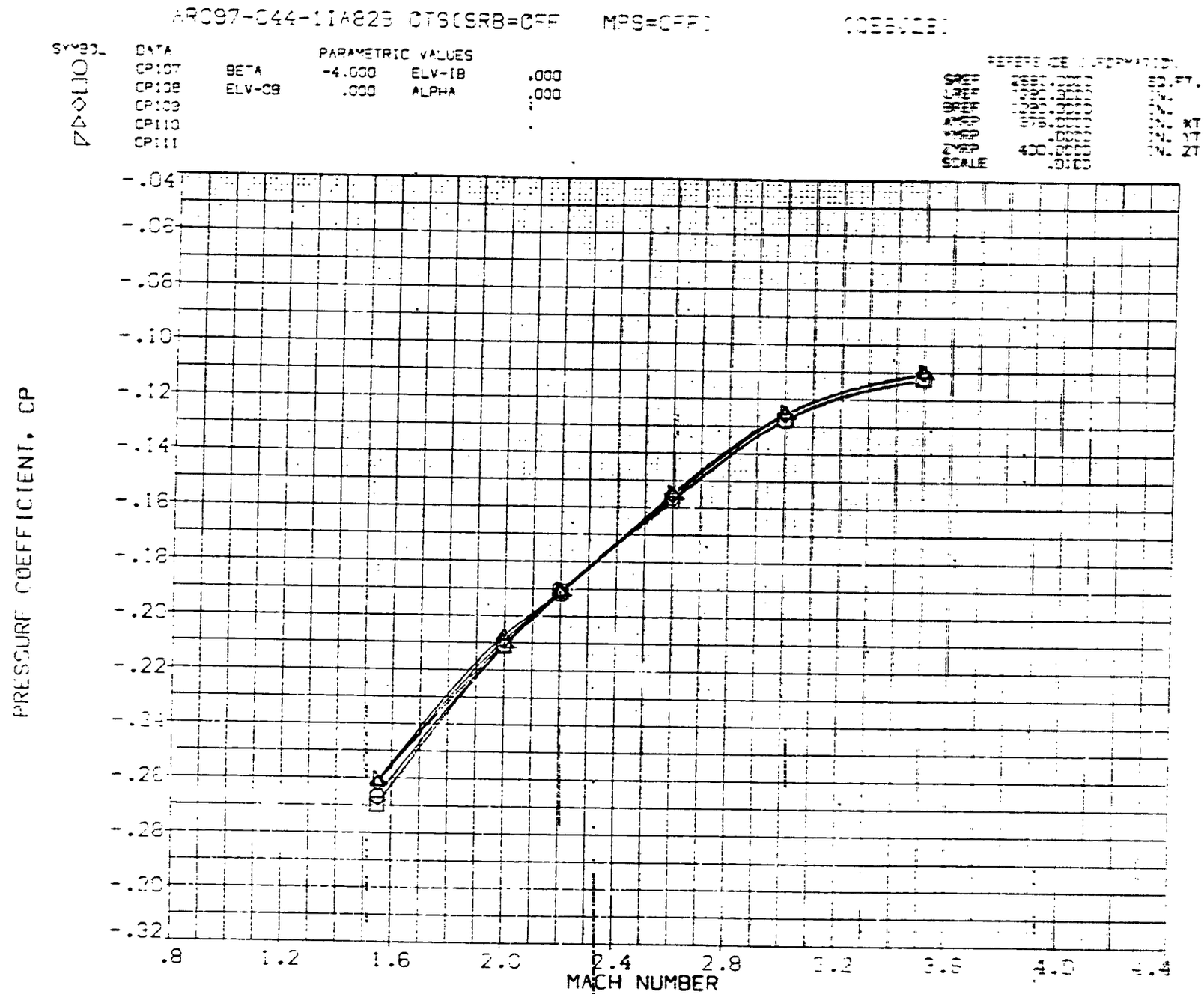


FIG. 65 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=OFF. MPS=OFF

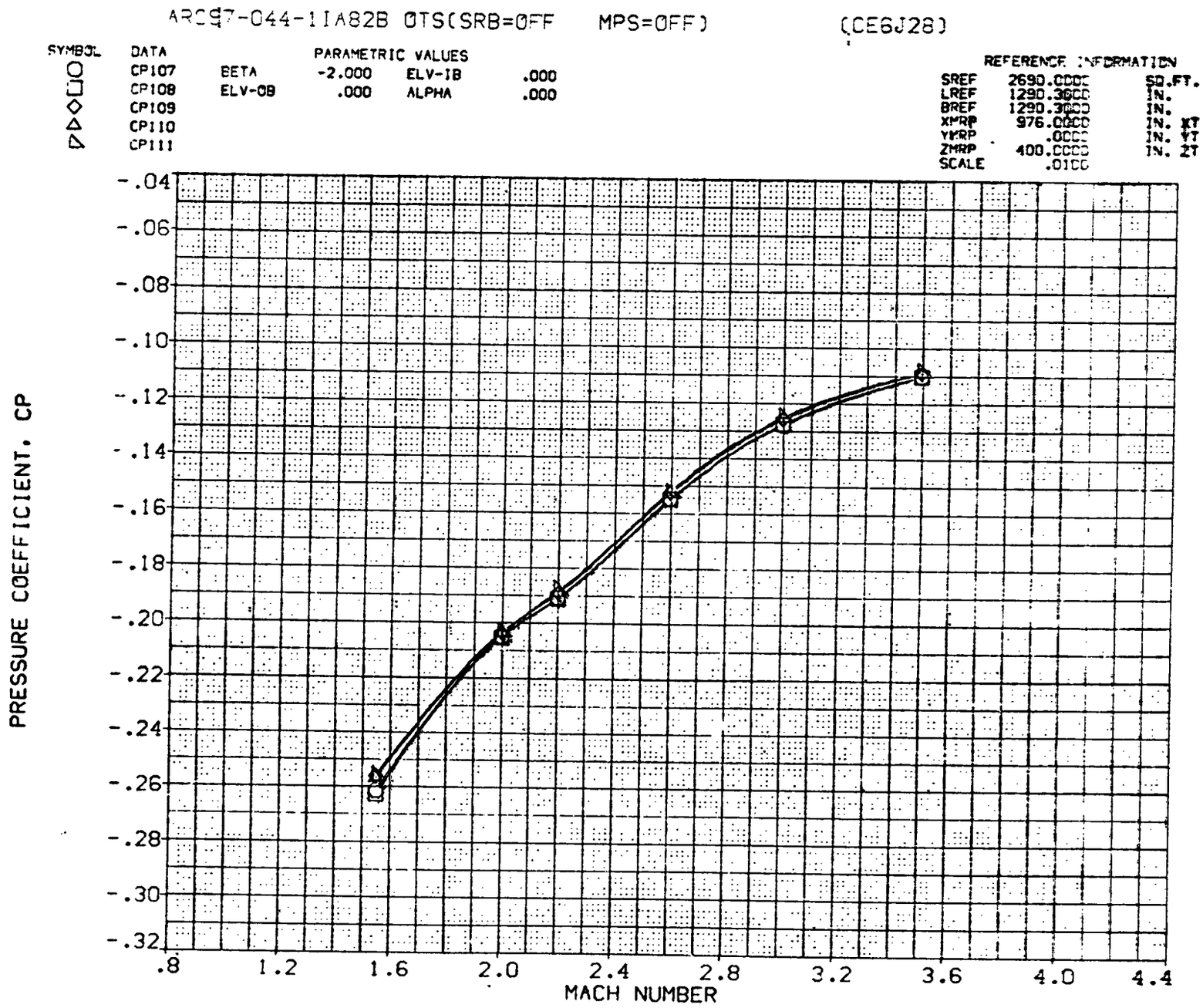


FIG. 65 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=OFF, MPS=OFF

ARC97-044-1IA82B 0TS(SRB=0FF MPS=0FF) (CE6J28)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP107	BETA	.000	ELV-1B	.000
□	CP108	ELV-0B	.000	ALPHA	.000
◇	CP109				
△	CP110				
▽	CP111				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

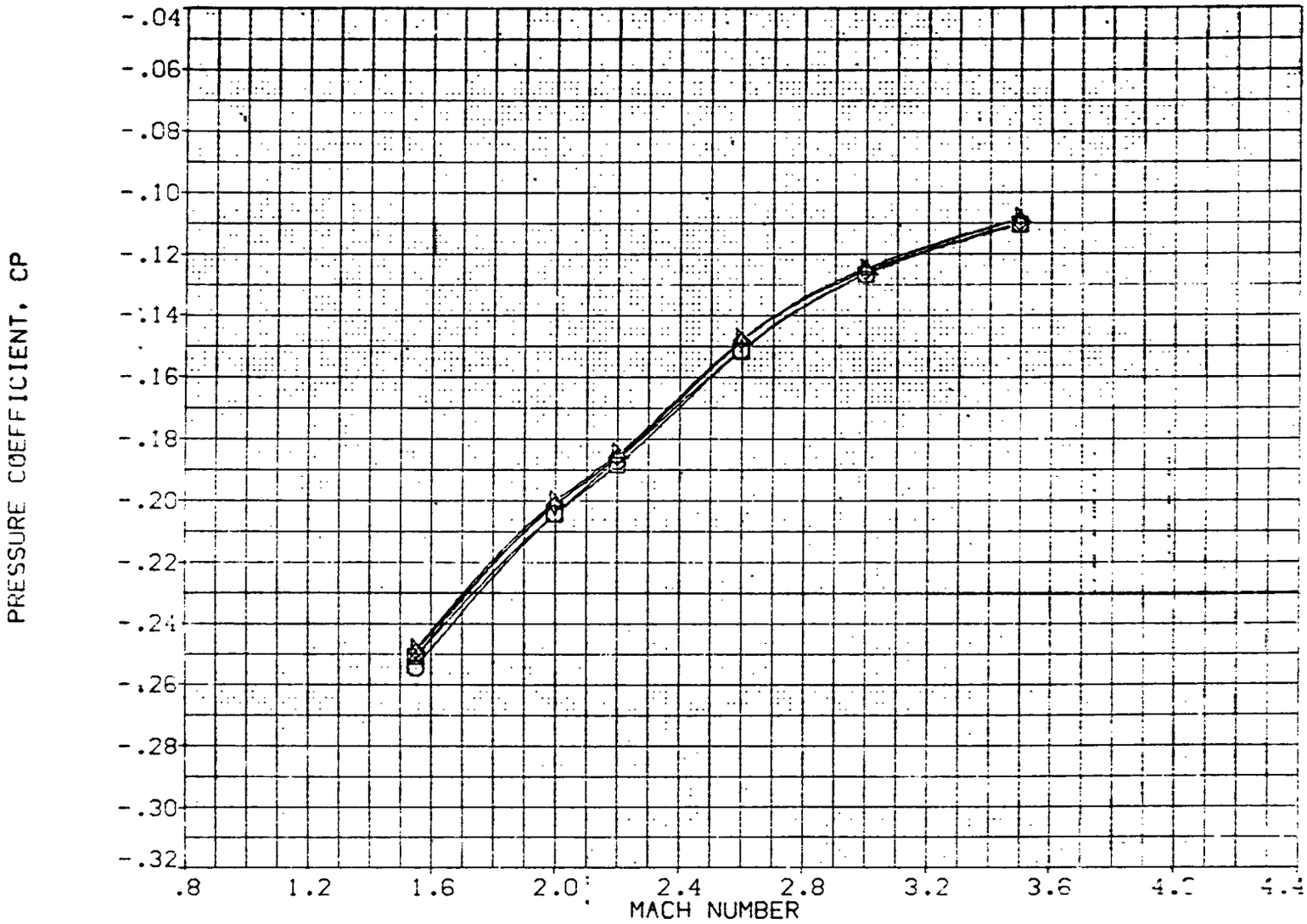


FIG. 65 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=0FF, MPS=0FF

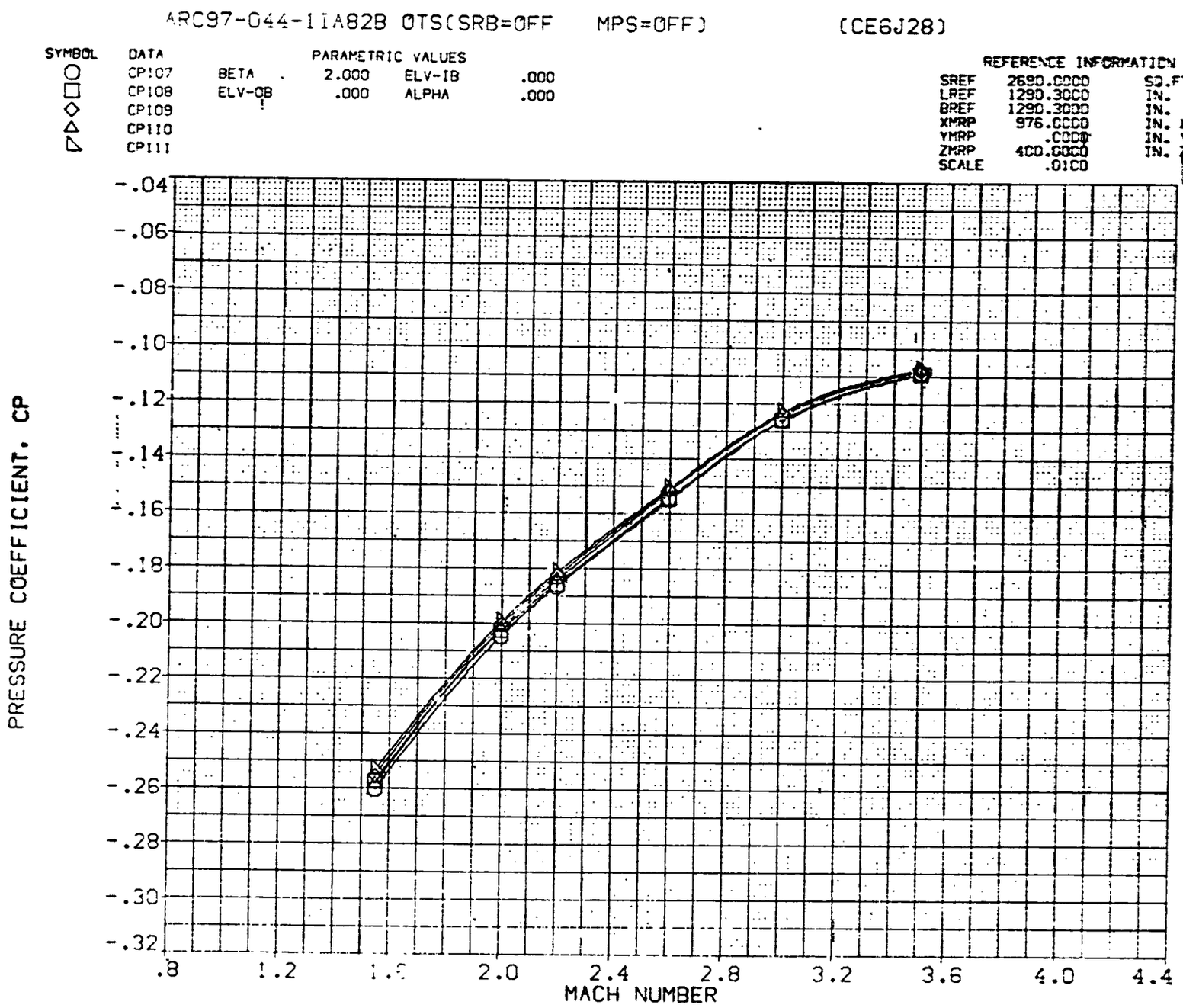


FIG. 65 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=OFF, MPS=OFF

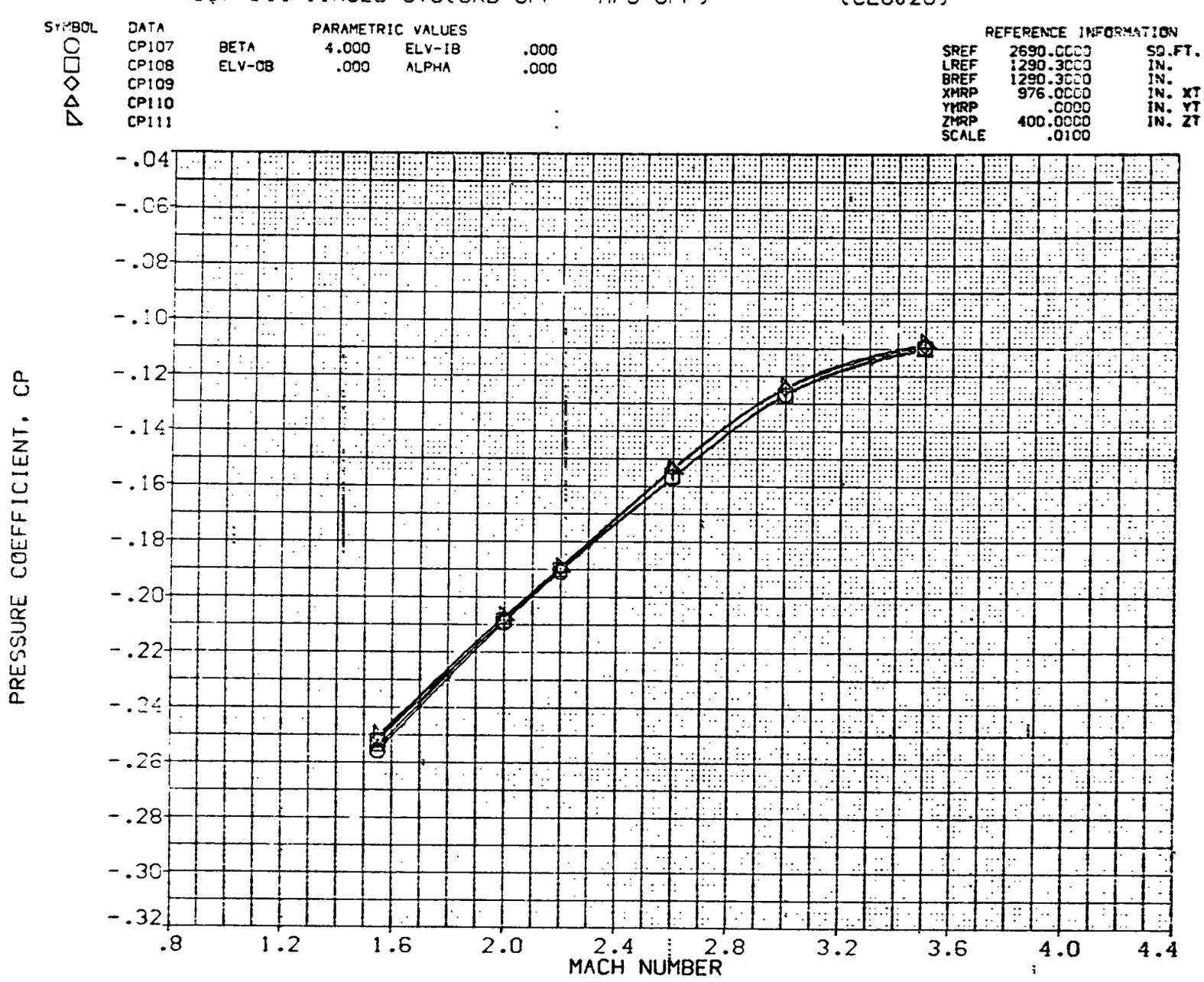


FIG. 65 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=0FF, MPS=0FF

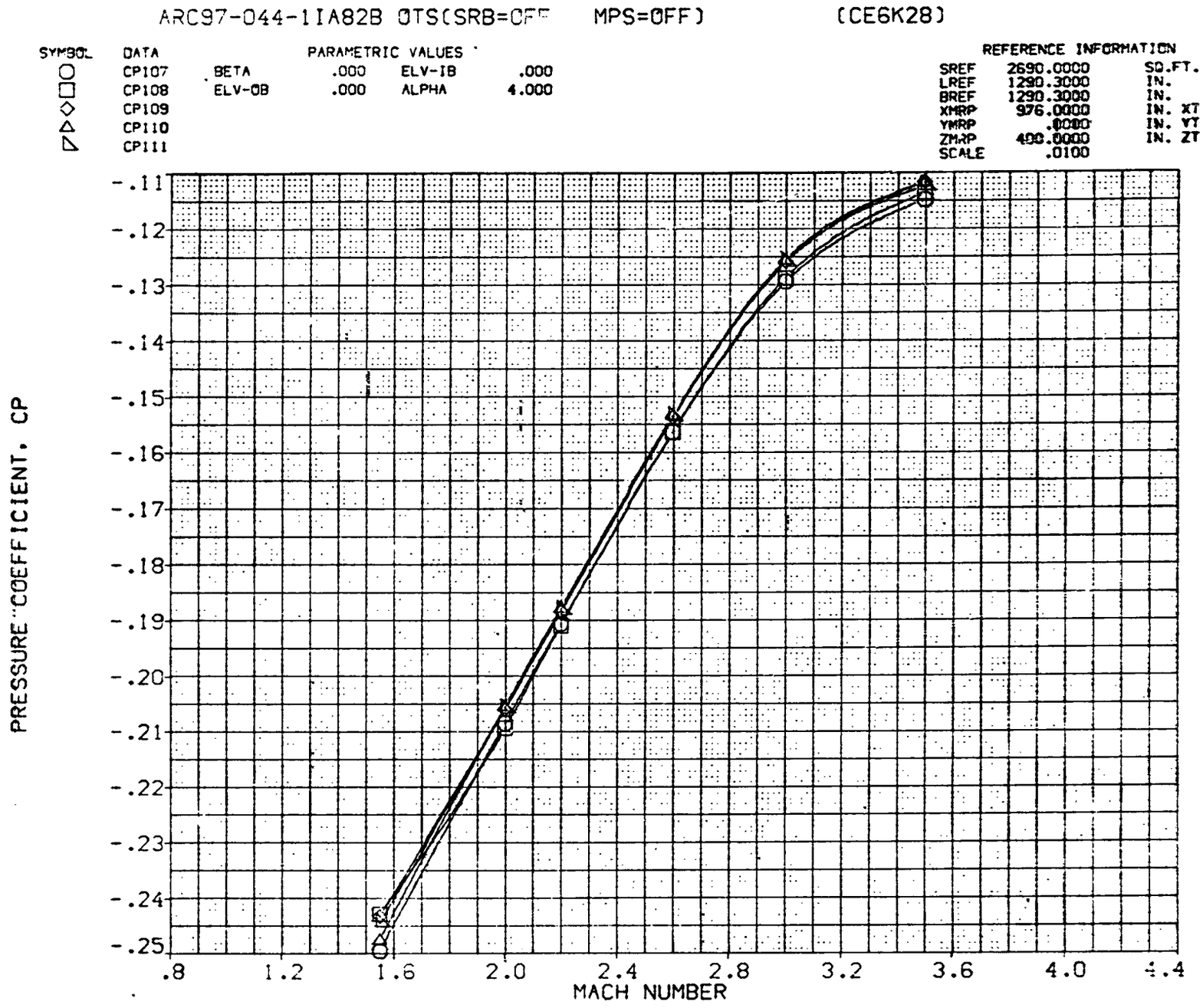


FIG. 65 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=OFF, MPS=OFF

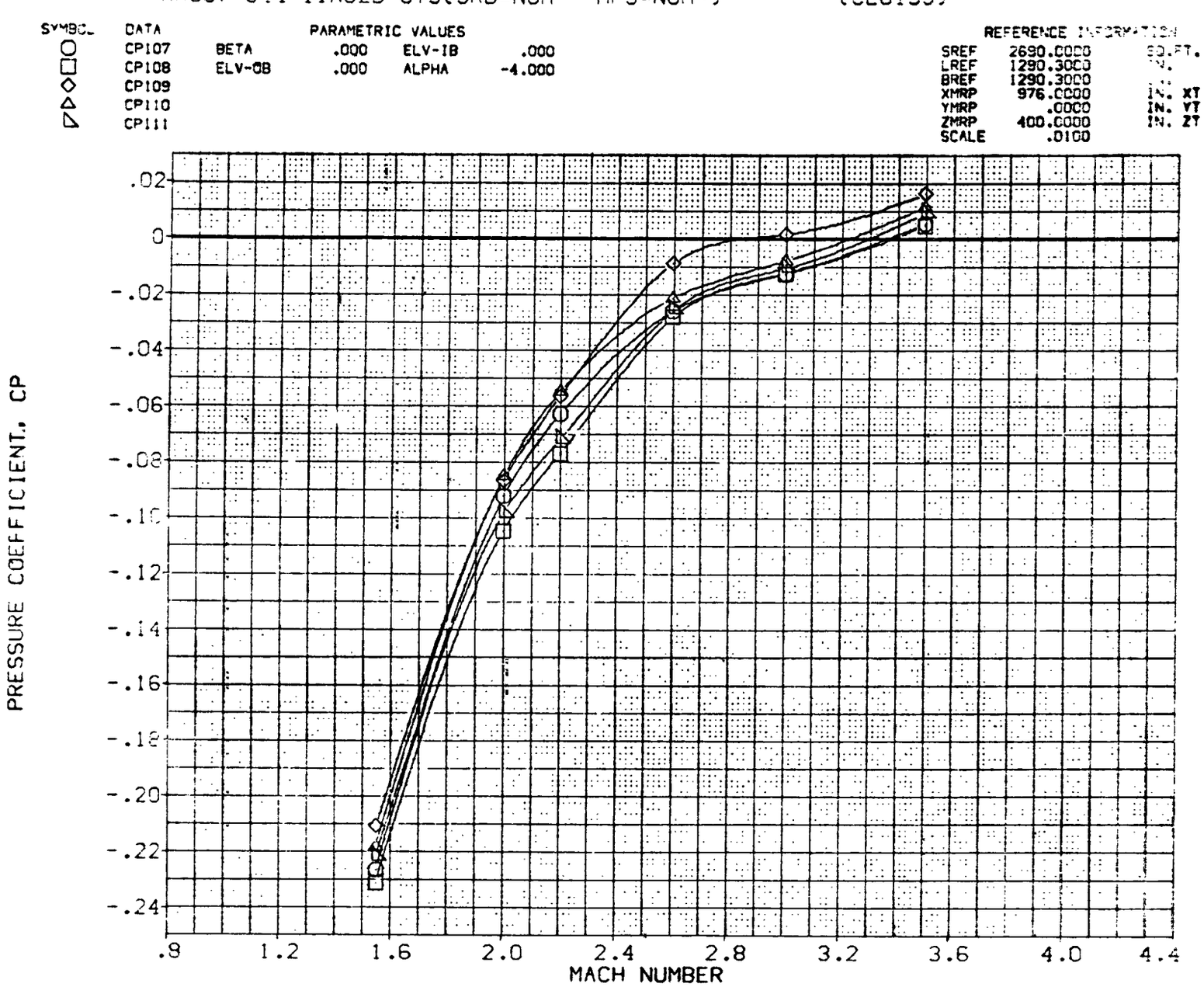


FIG. 66 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=N0M, MPS=N0M-

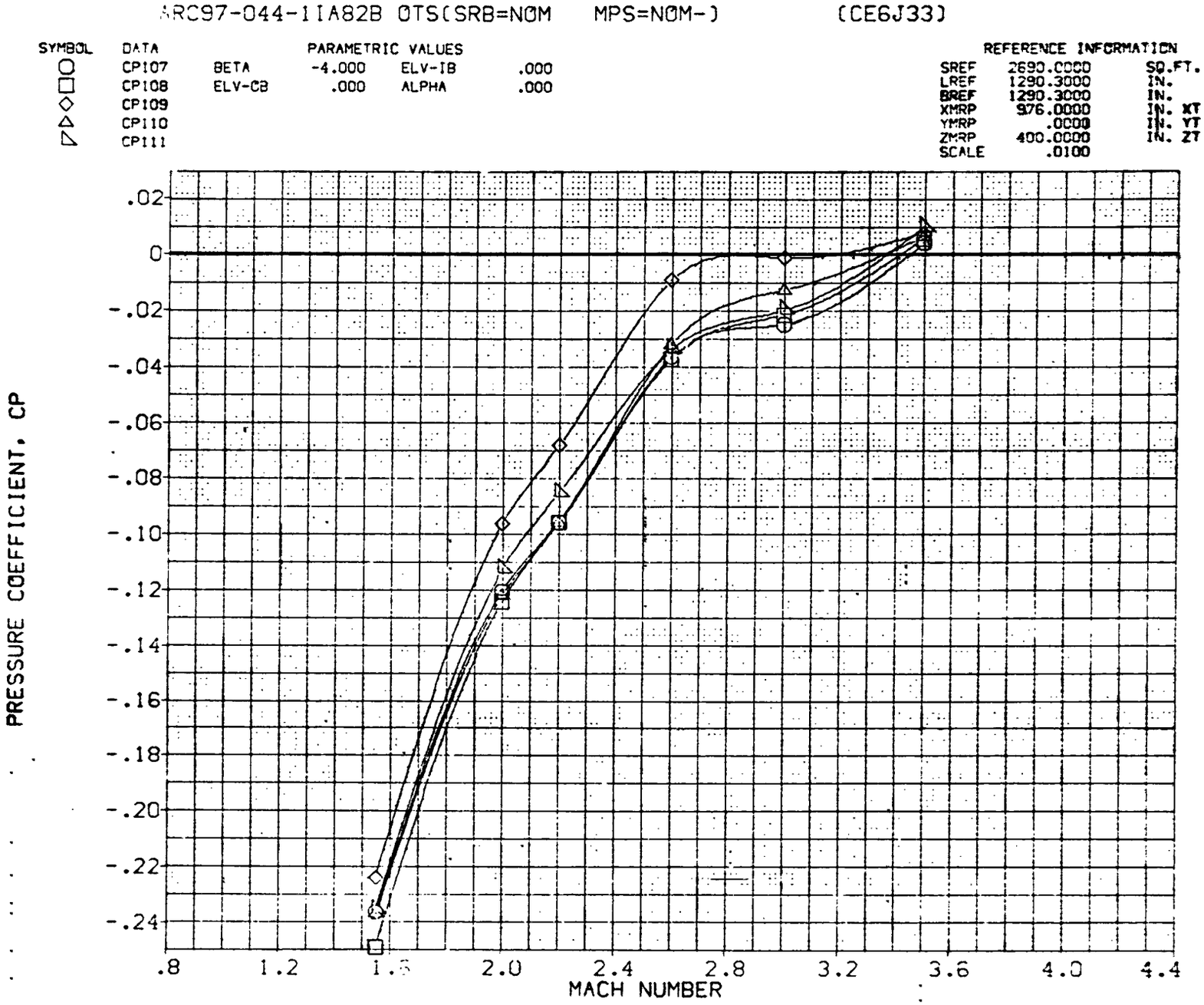


FIG. 66 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM-

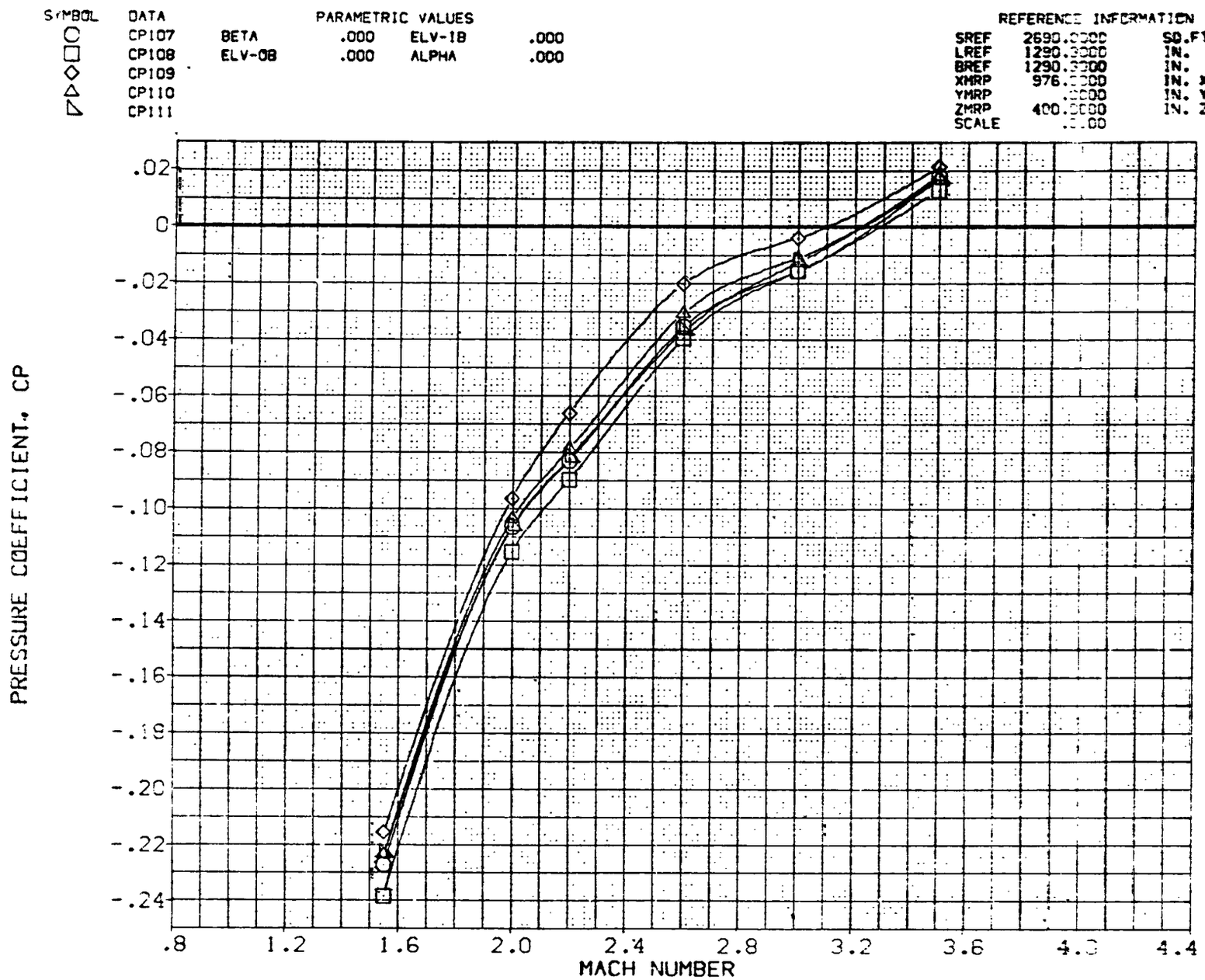


FIG. 66 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM-

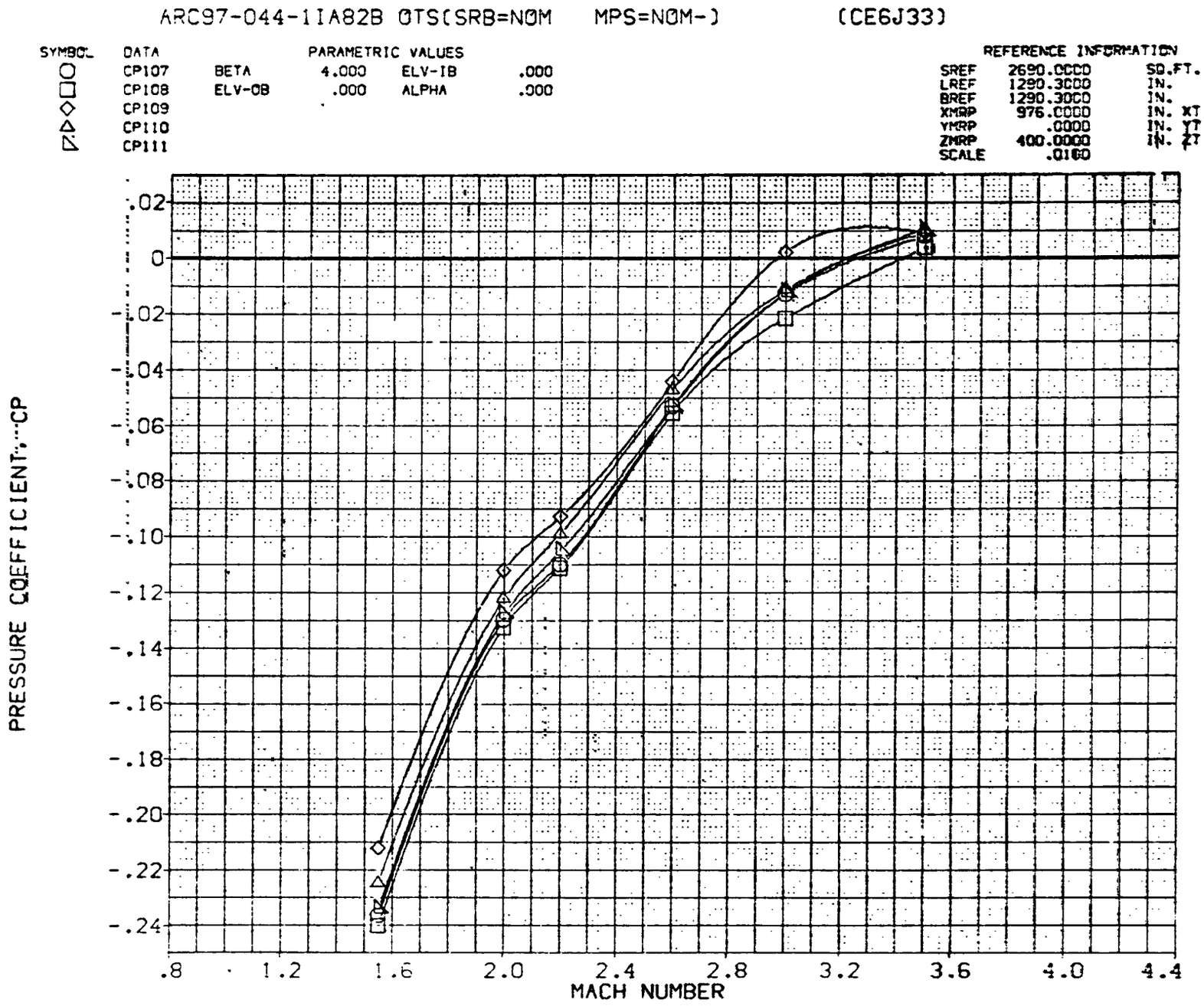


FIG. 66 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM-

: ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM-) (CE6K33)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP107	BETA	.000	ELV-IB	.000
□	CP108	ELV-OB	.000	ALPHA	4.000
◇	CP109				
△	CP110				
▽	CP111				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	990.0000	IN.
BREF	90.0000	IN.
XMRP	.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0100	

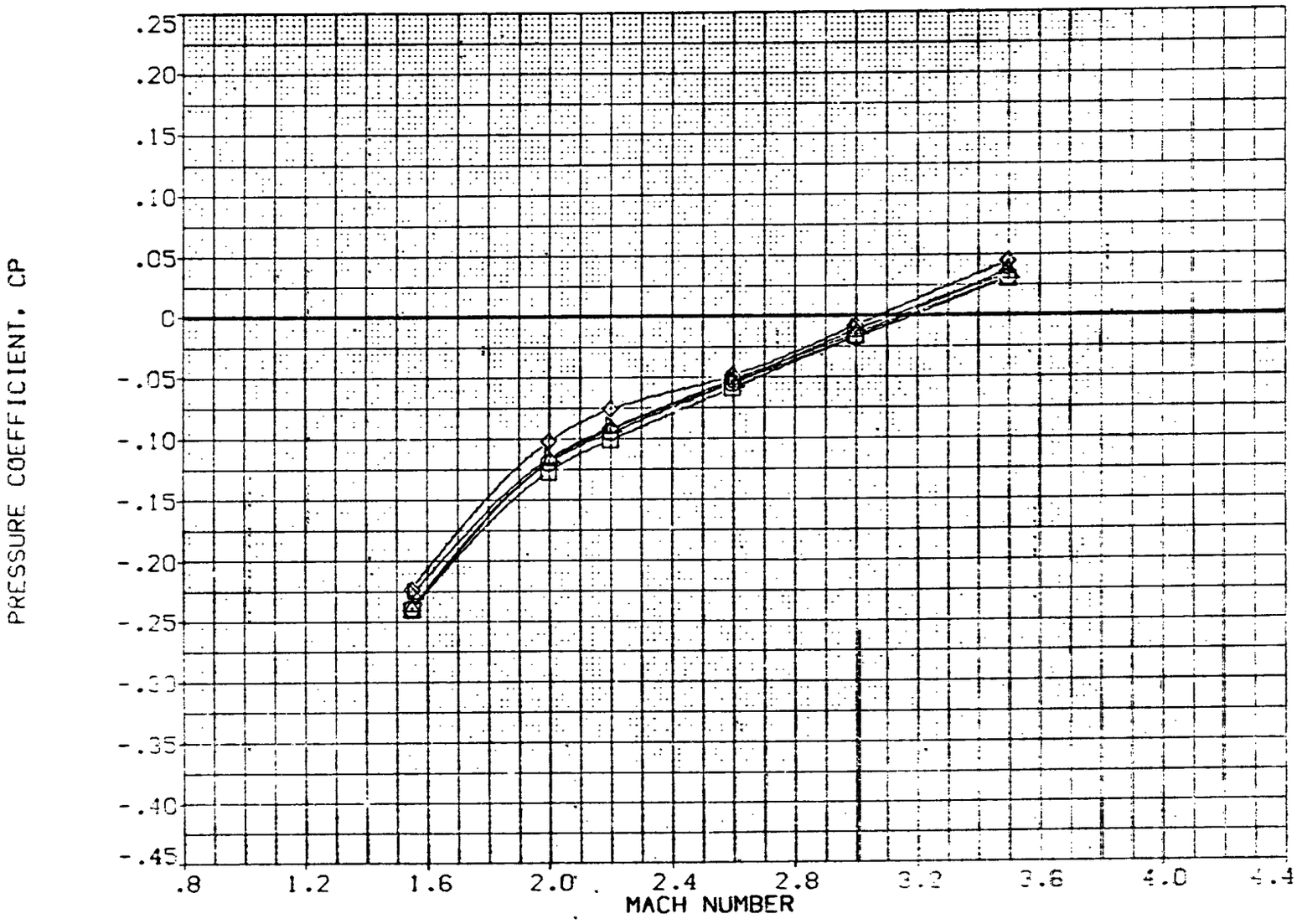


FIG. 66 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM. MPS=NOM-

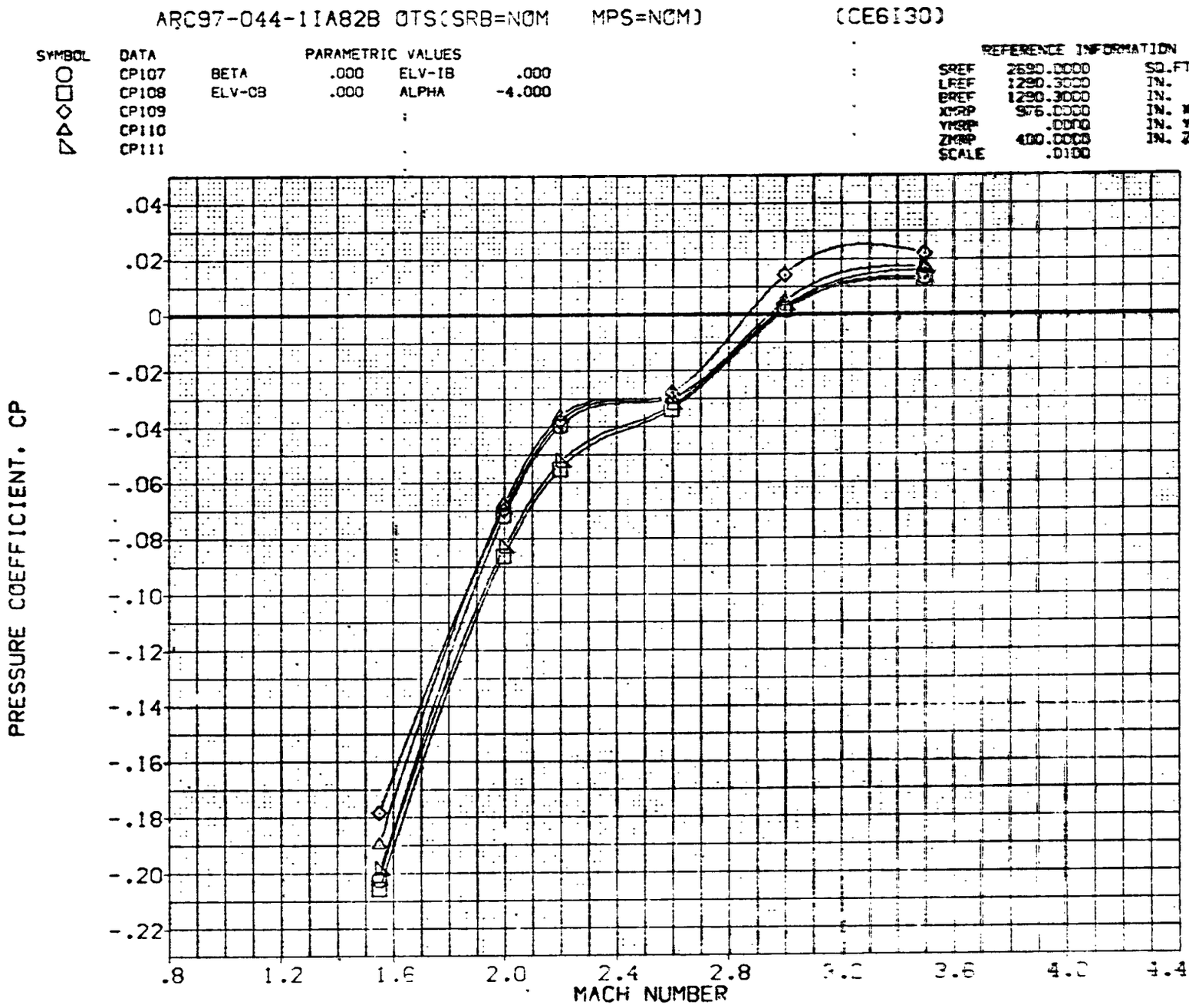


FIG. 67 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM

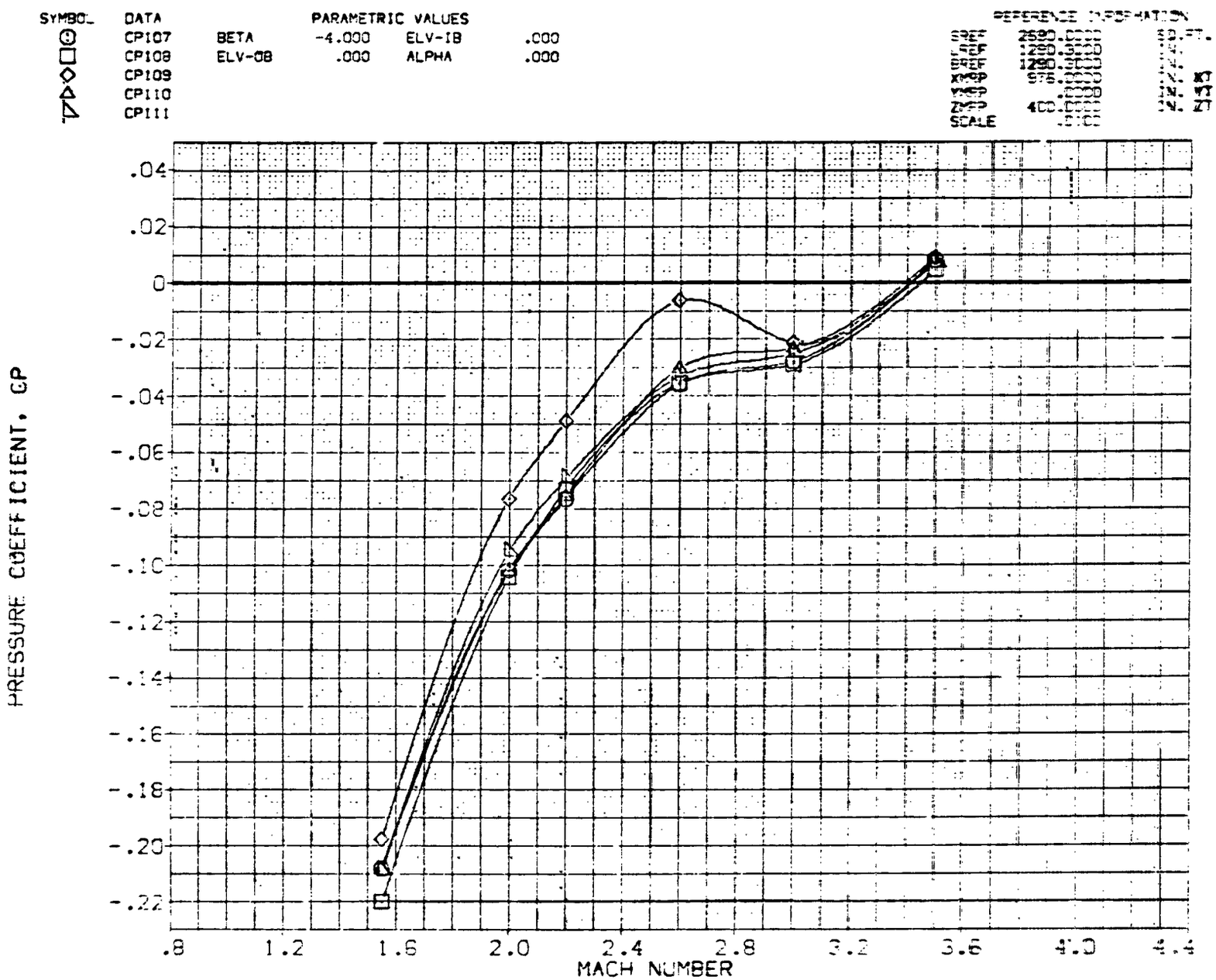


FIG. 67 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM. MPS=NOM

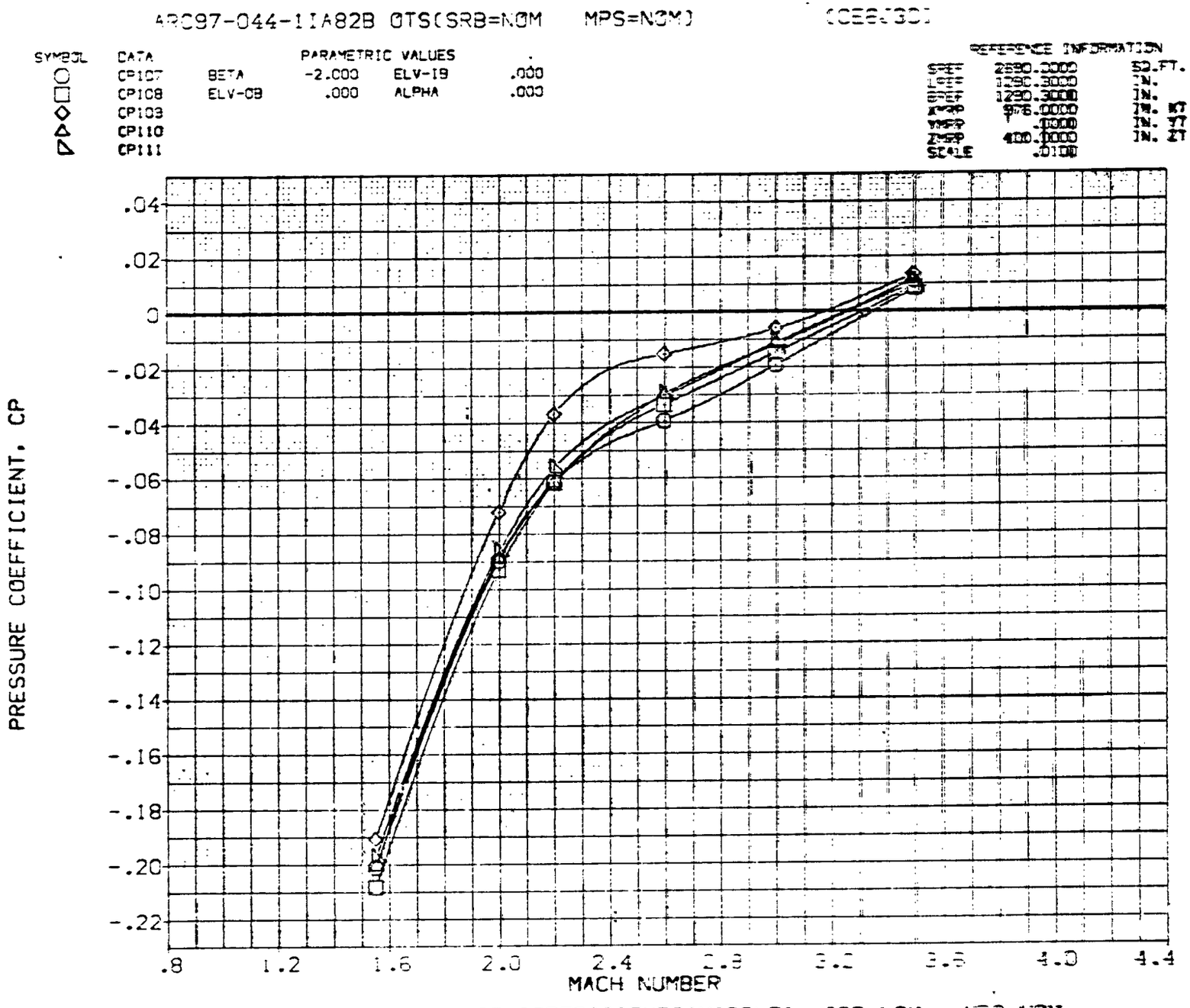


FIG. 67 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM. MPS=NOM

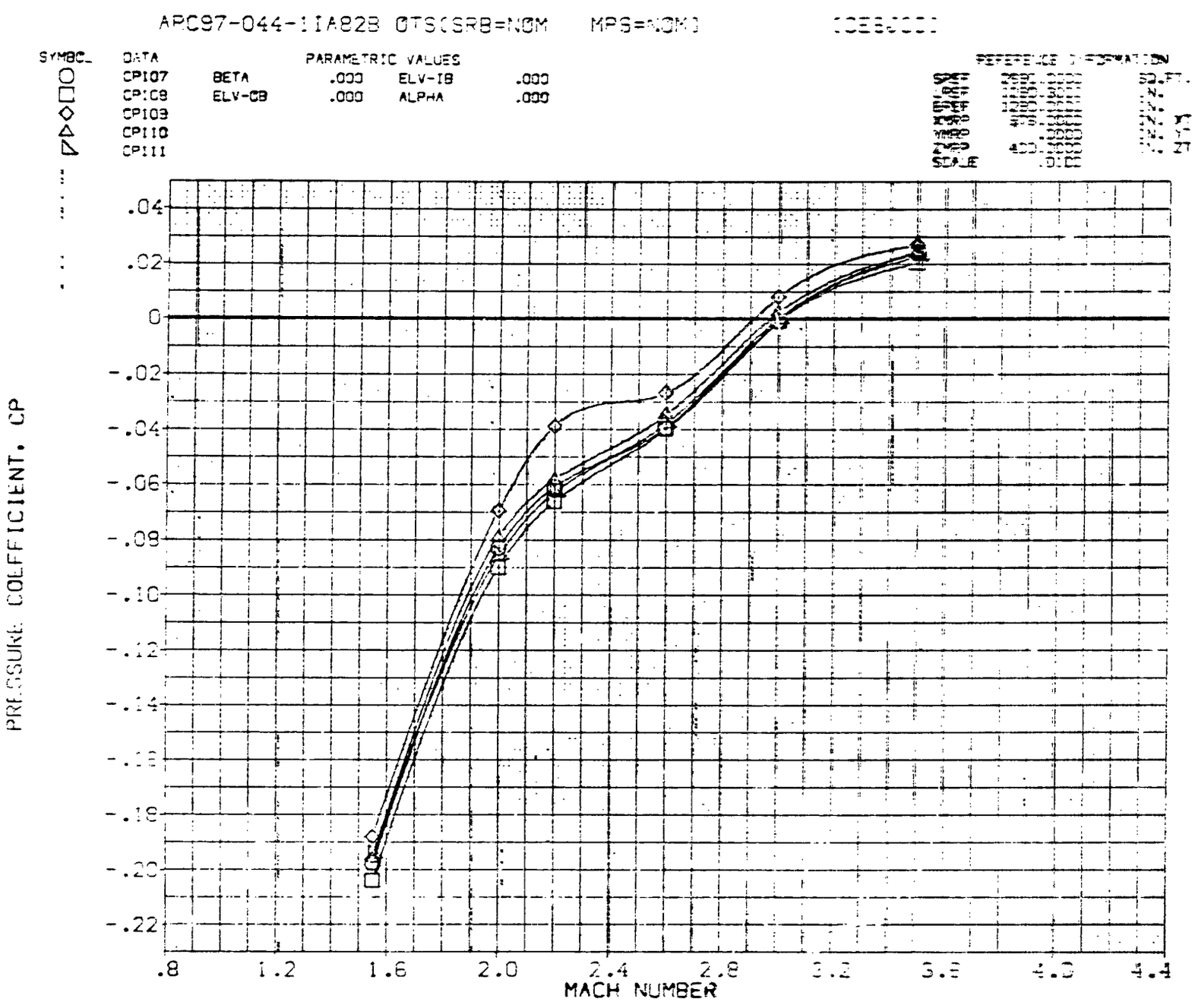


FIG. 67 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM. MPS=NOM

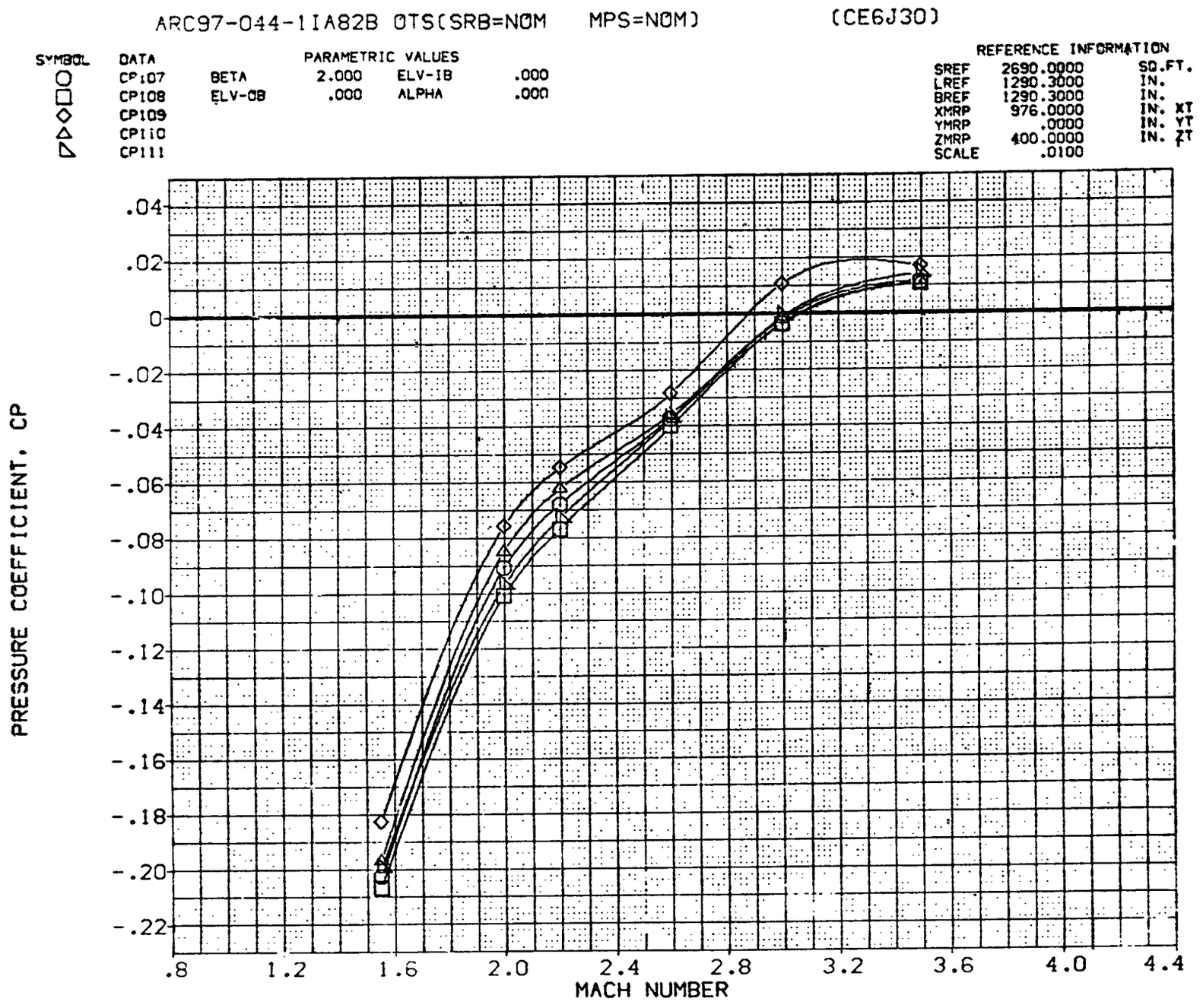


FIG. 67 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM

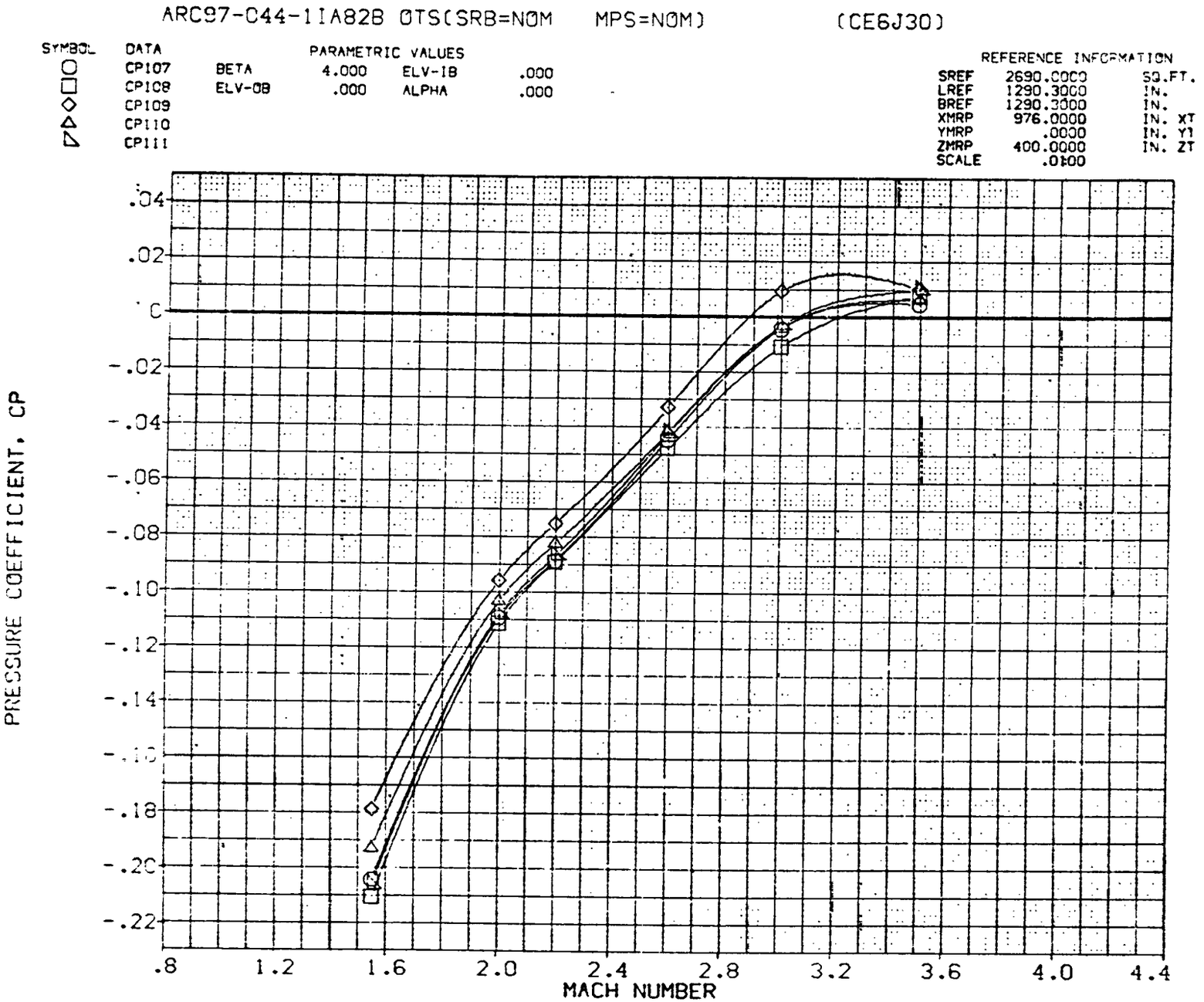


FIG. 67 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM

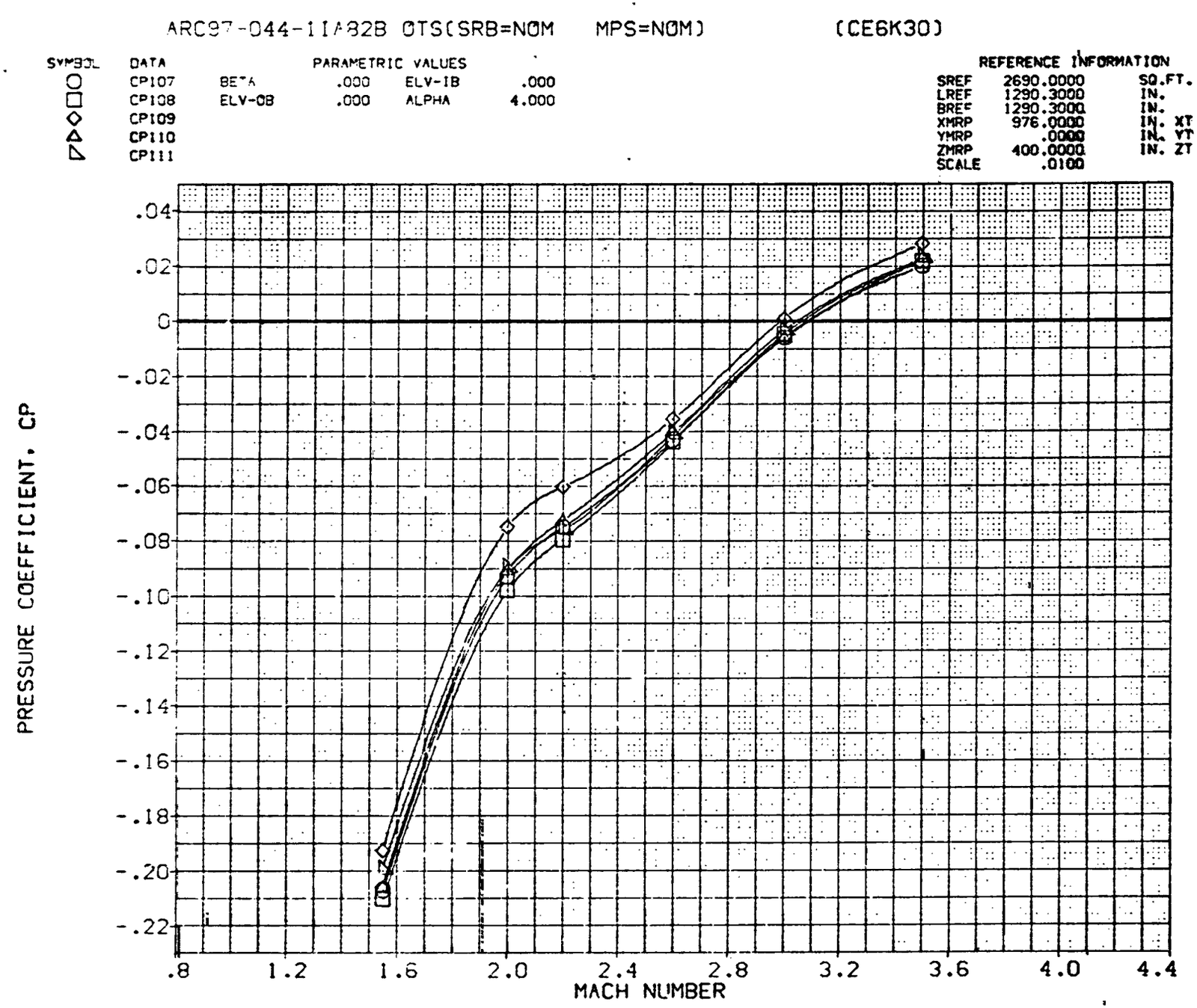


FIG. 67 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM

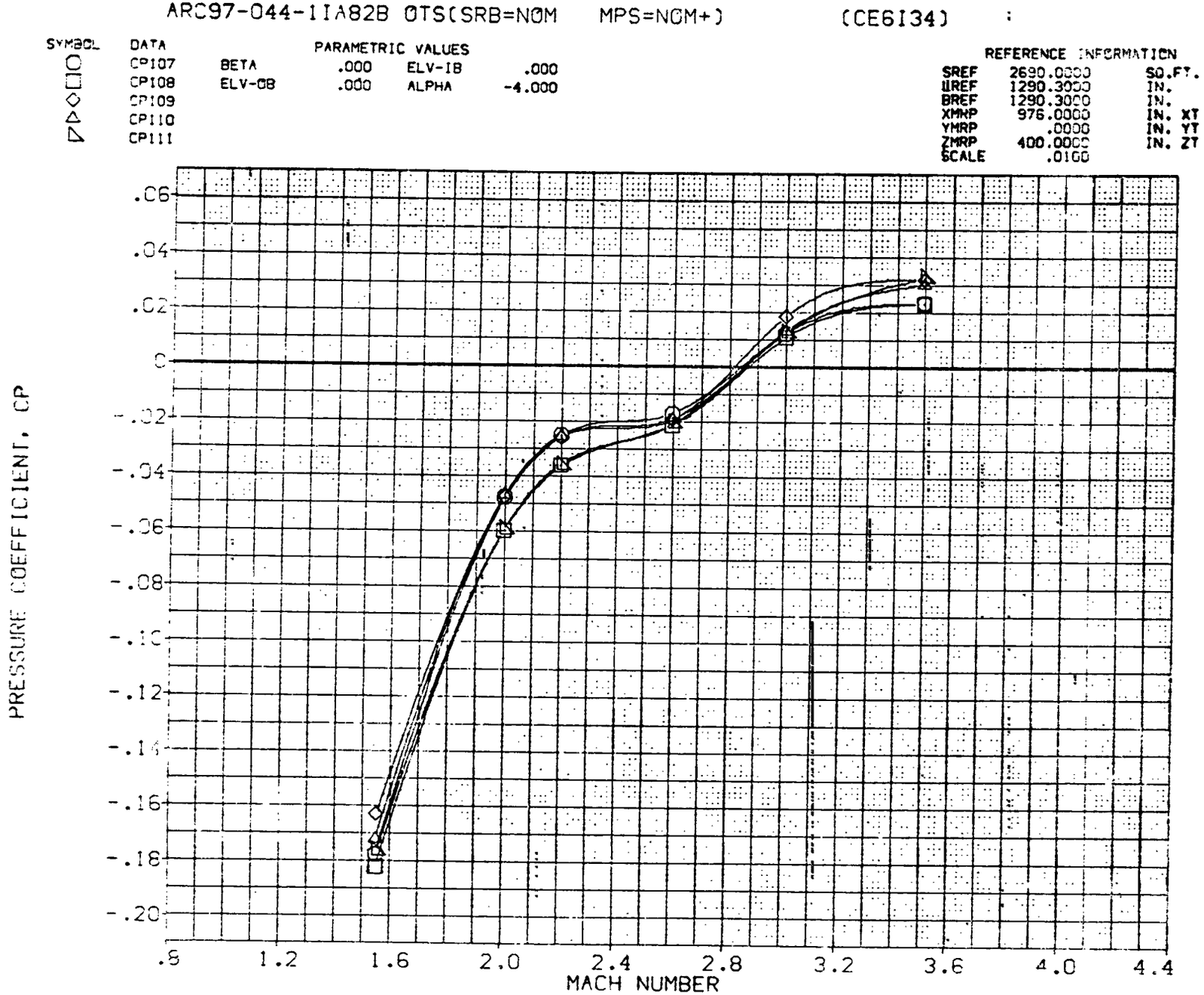


FIG. 68 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM+

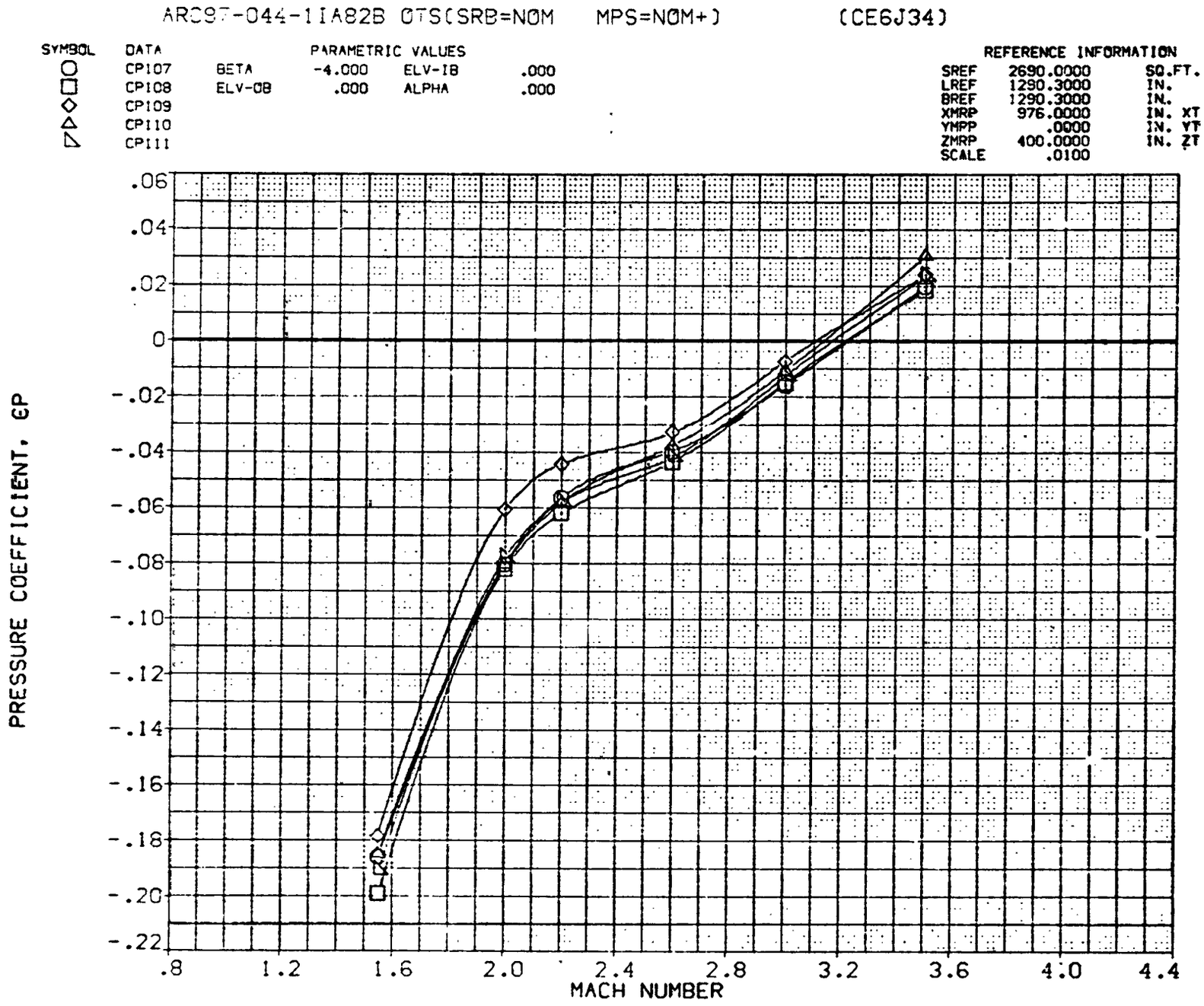


FIG. 68 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM+

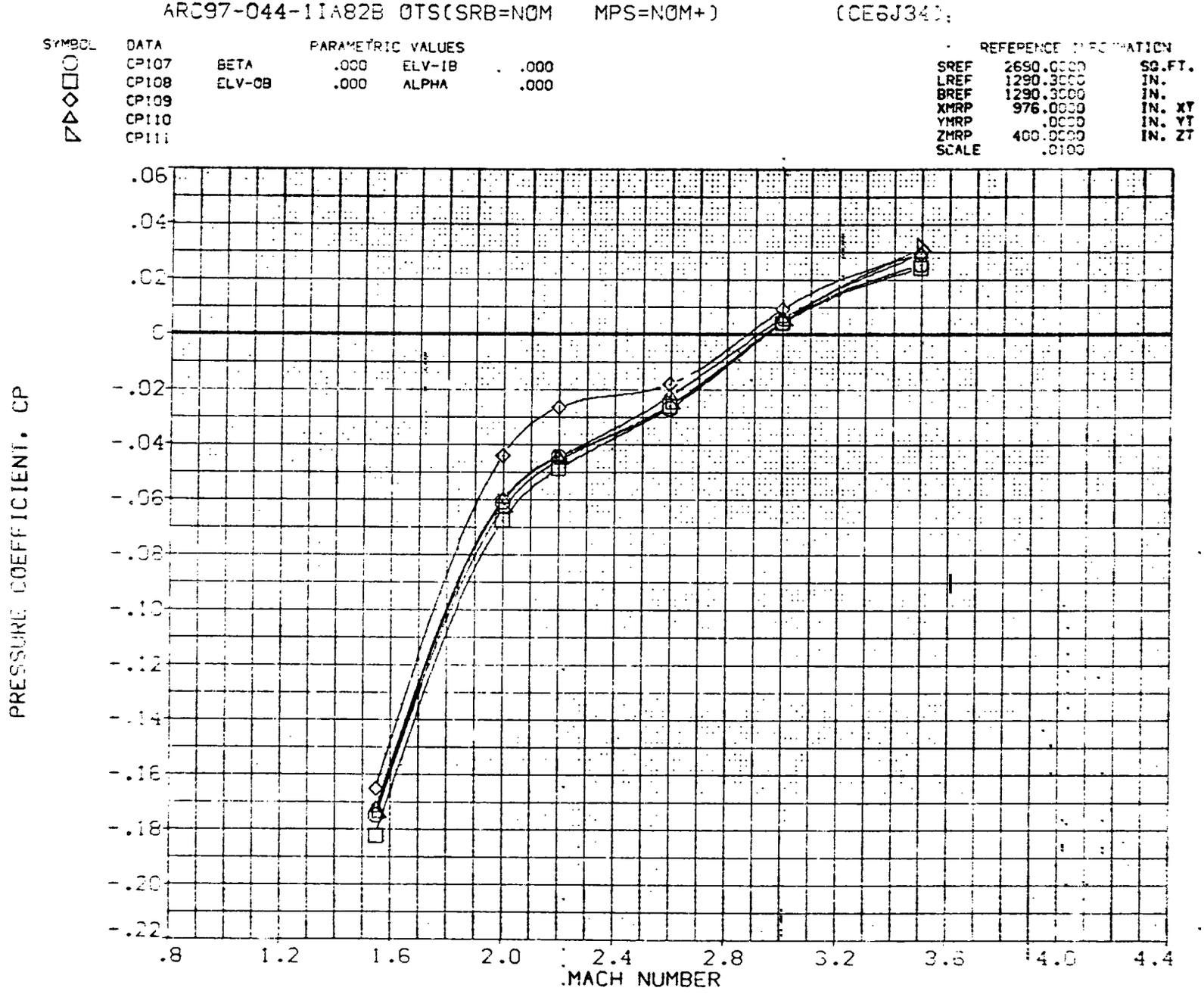


FIG. 68 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM+

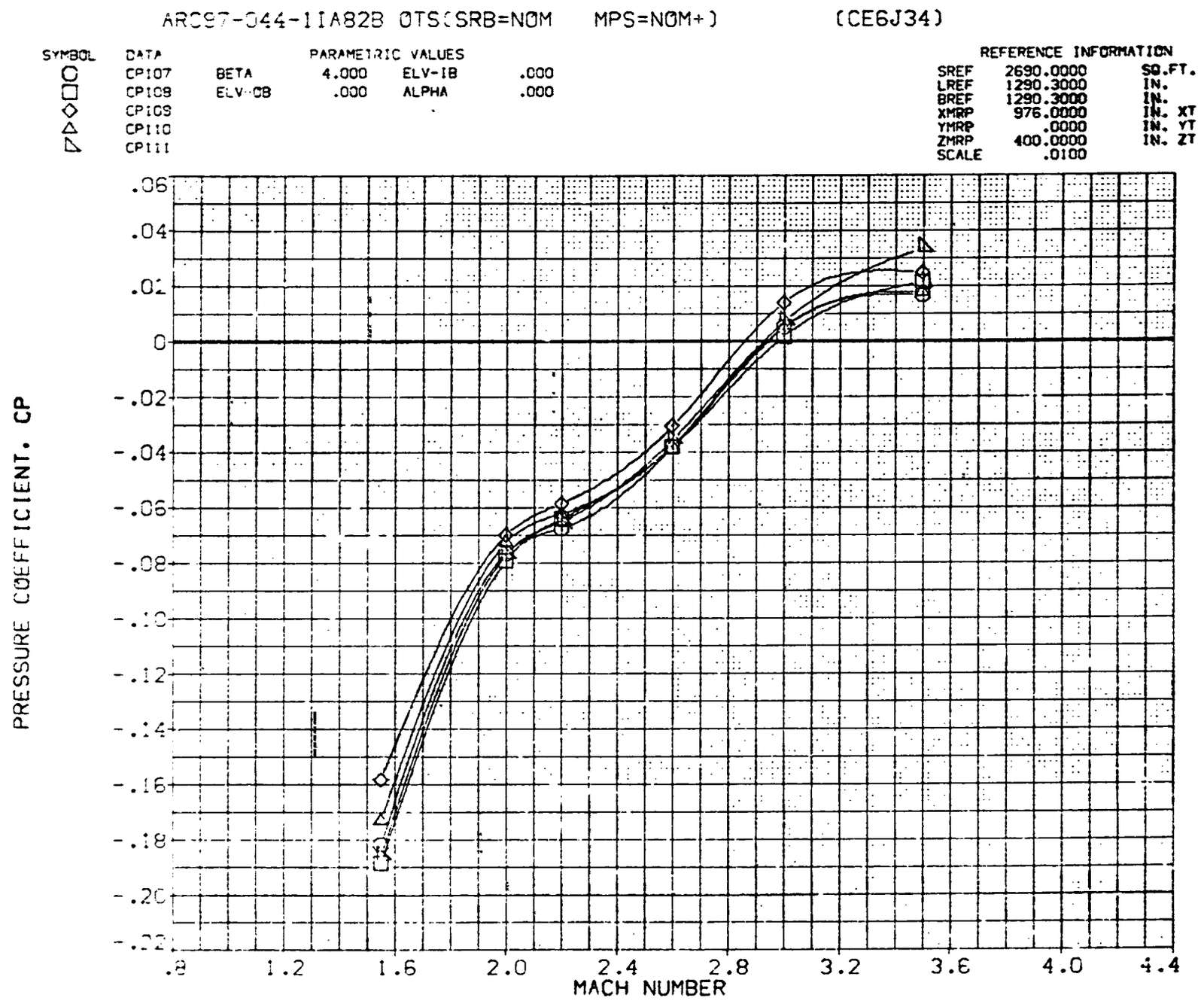


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM+

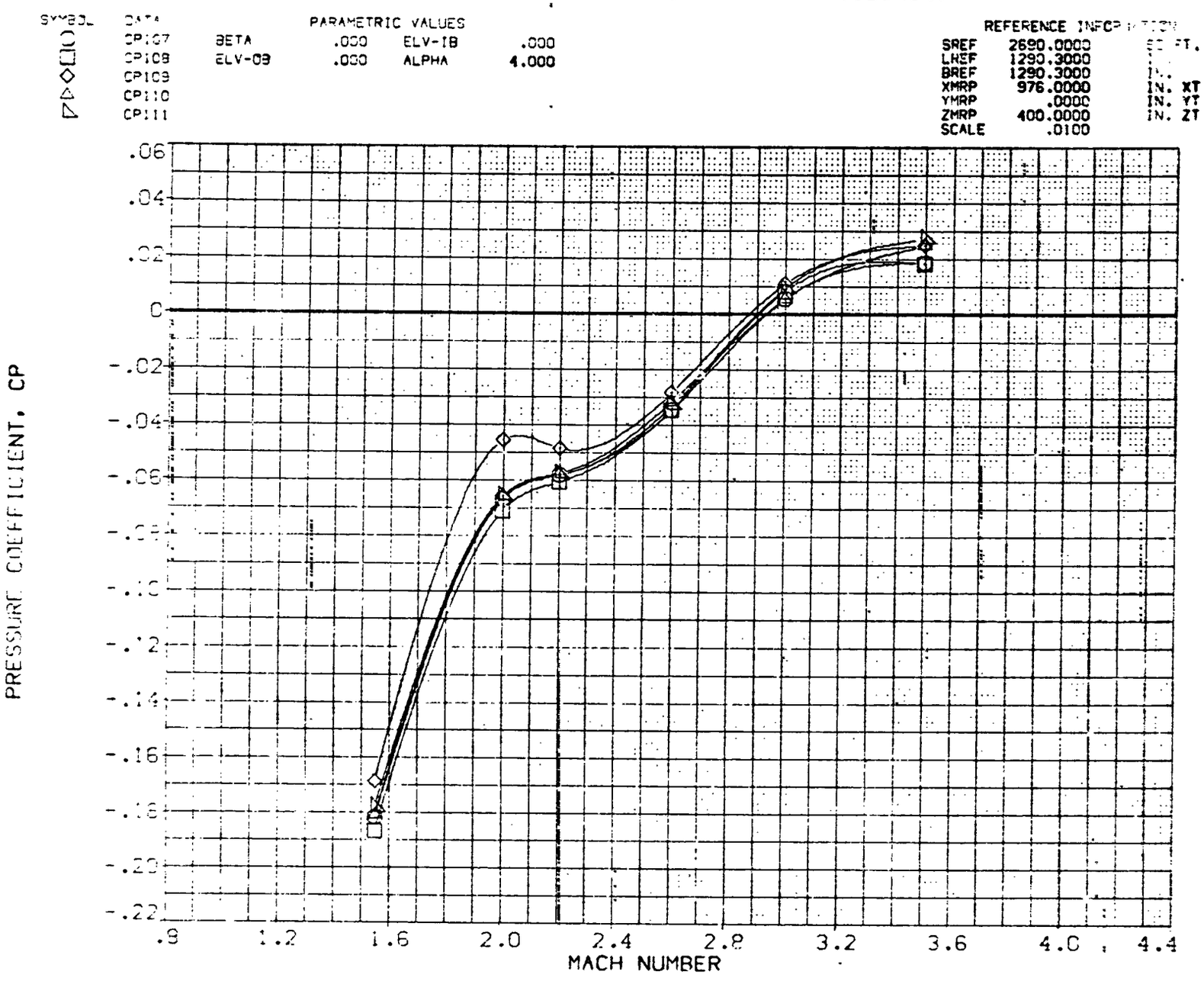


FIG. 68 ORBITER BASE PRESSURE COEFFICIENTS(MIDDLE) SRB=NOM, MPS=NOM+

ARC9T-044-11A82B CTS(SRB=0FF MPS=0FF) (DE6128)

SYMBOL	DATA
○	CP112
□◇	CP113
	CP114
△	CP131

PARAMETRIC VALUES

BETA	-4.000	ELV-1B	.000
ELV-CB	.000	ALPHA	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

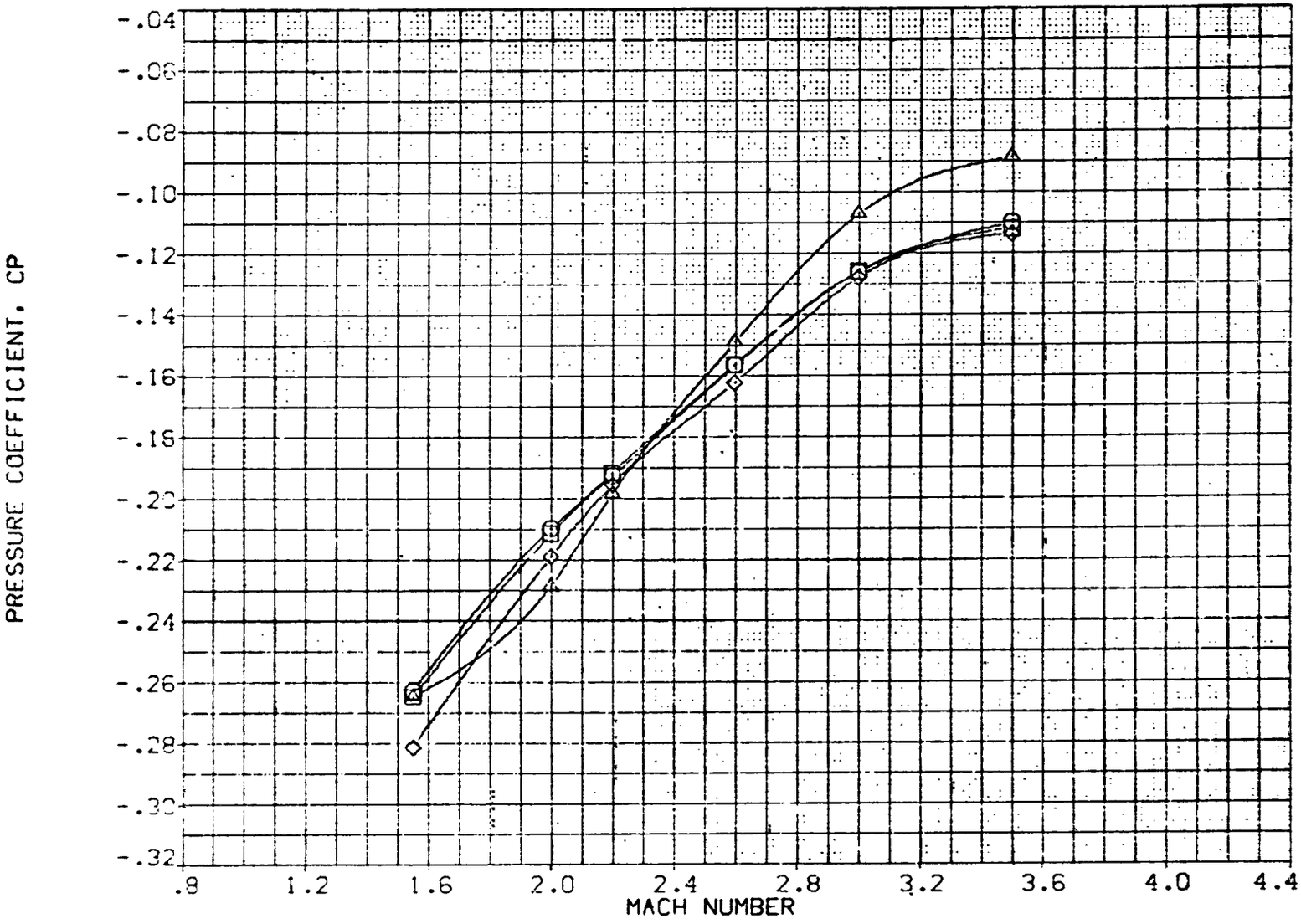


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=0FF, MPS=0FF

ARC97-044-11A82B OTS(SRB=OFF MPS=OFF) (DE6128)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP112	BETA	-2.000	ELV-IB	.000
□	CP113	ELV-OB	.000	ALPHA	.000
◇	CP114				
△	CP131				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

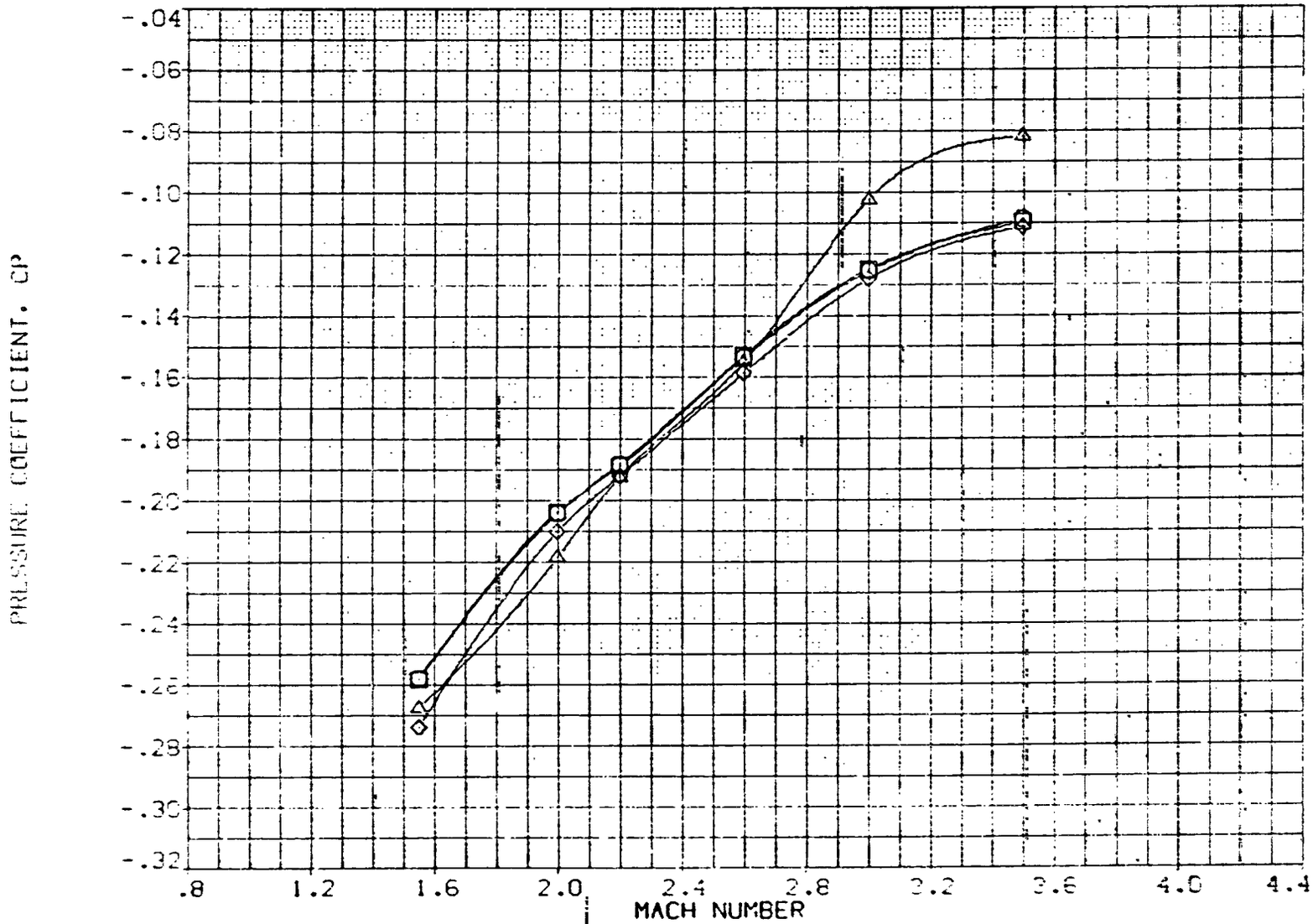


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=OFF, MPS=OFF

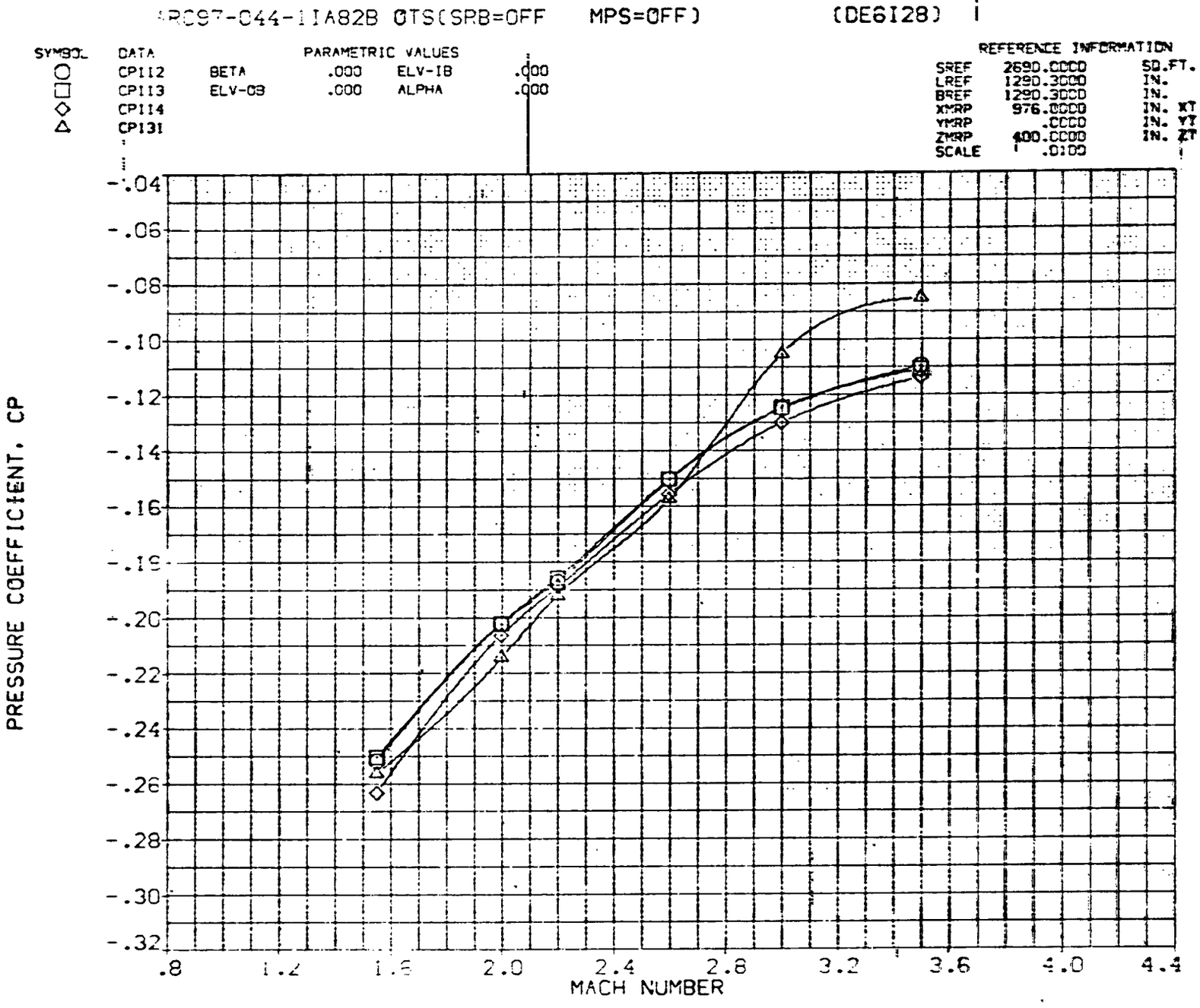


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=OFF, MPS-OFF

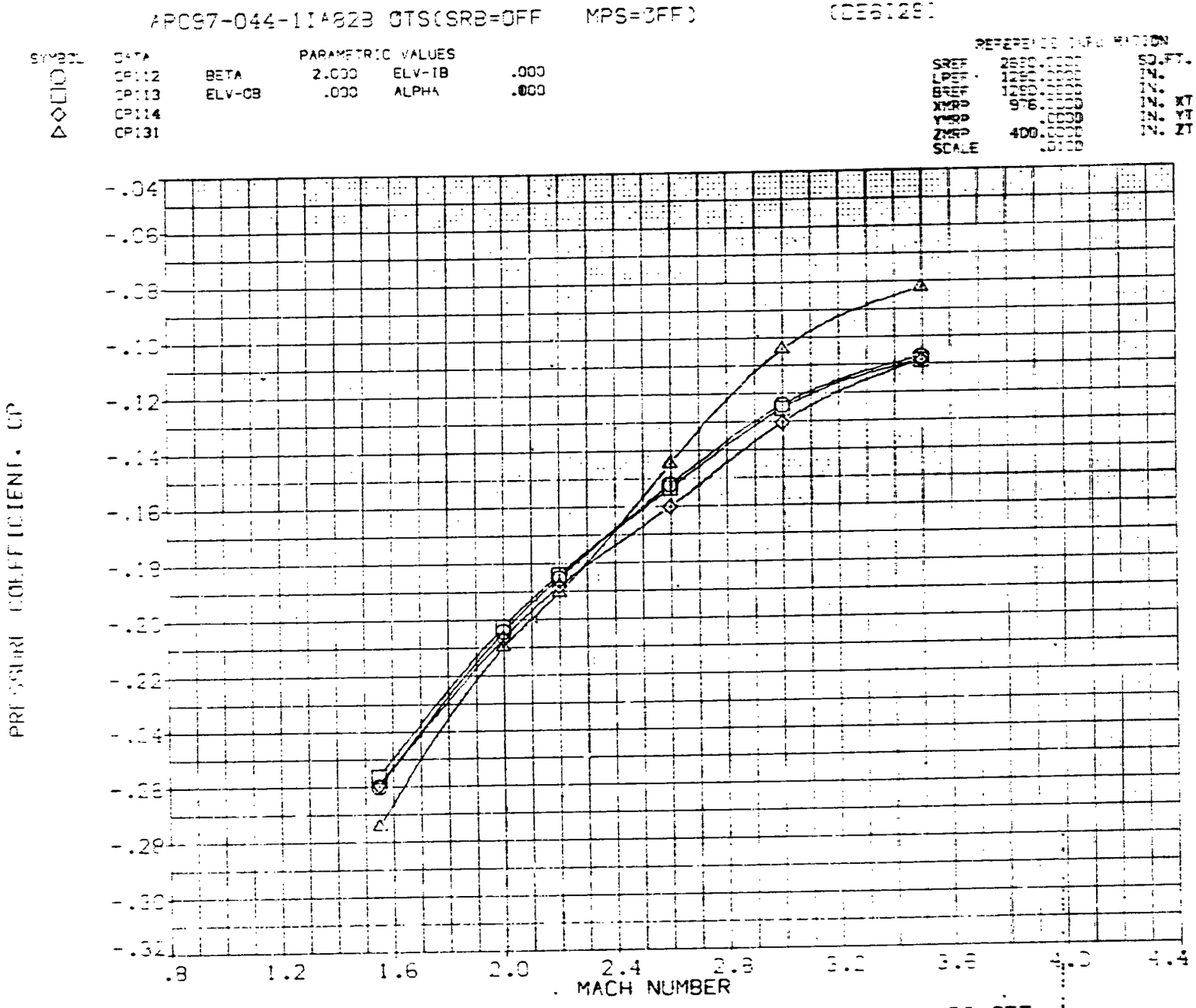


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=OFF, MPS=OFF

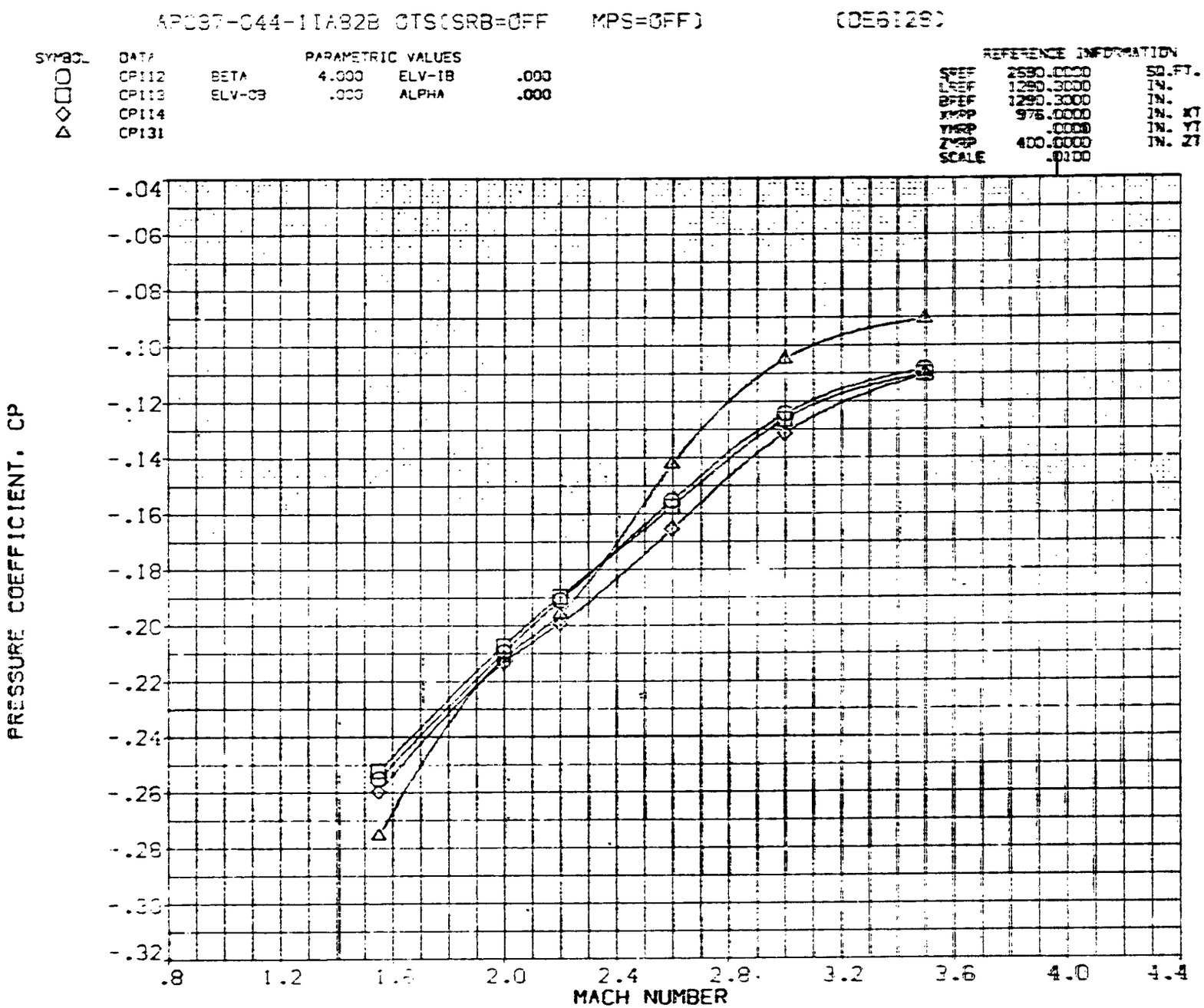


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=OFF, MPS=OFF

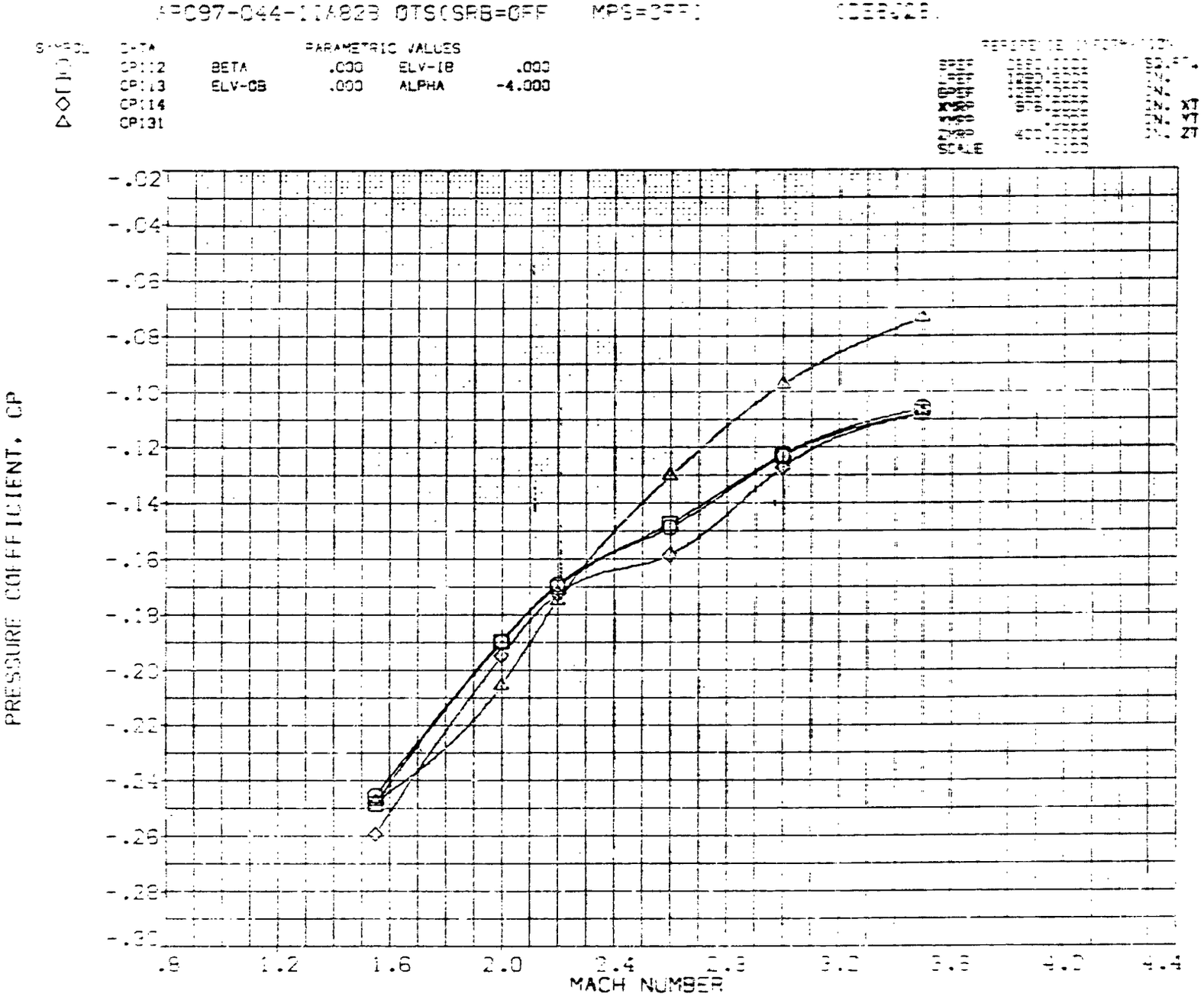


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=OFF, MPS=OFF

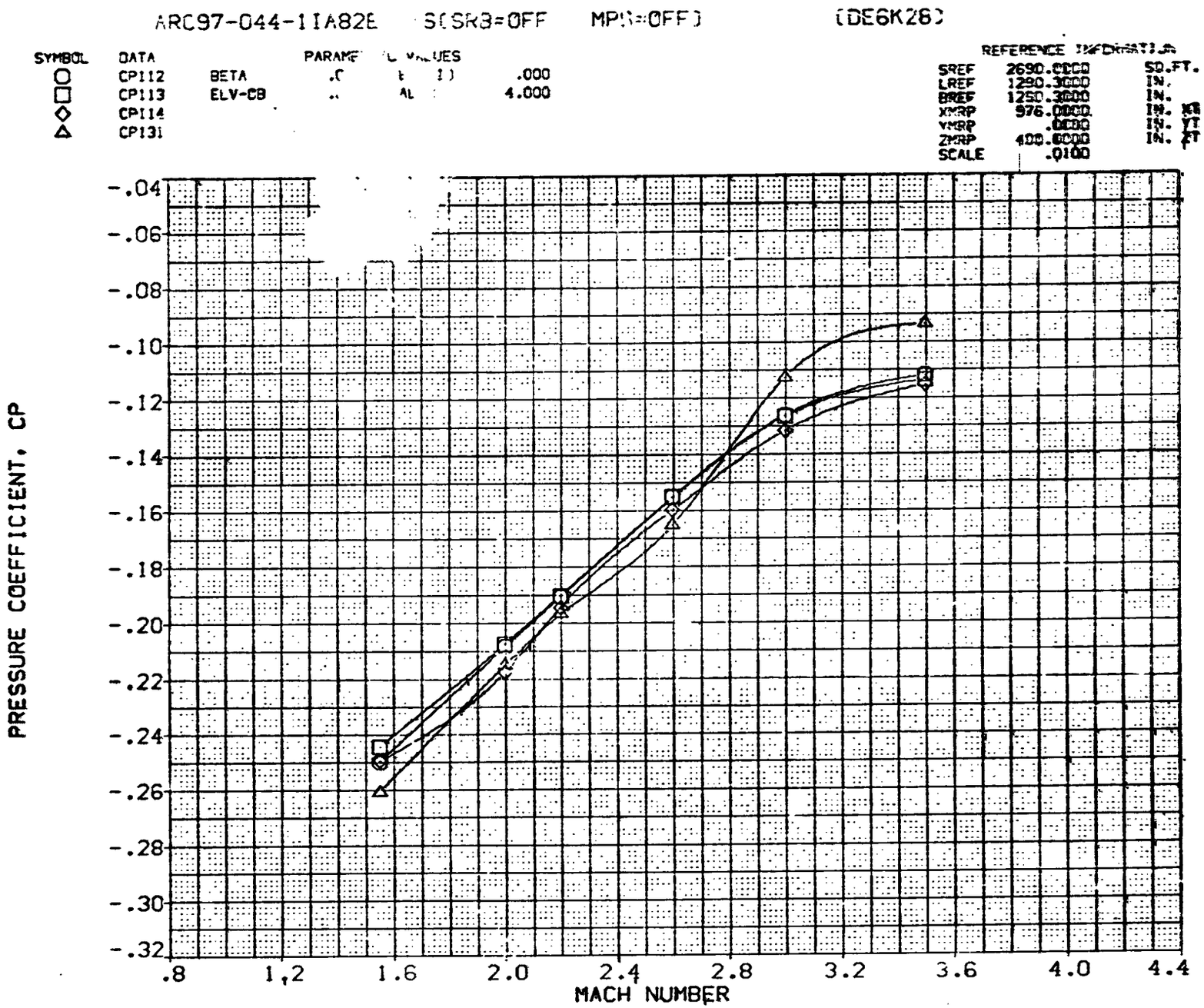


FIG. 69 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=OFF, MPS=OFF

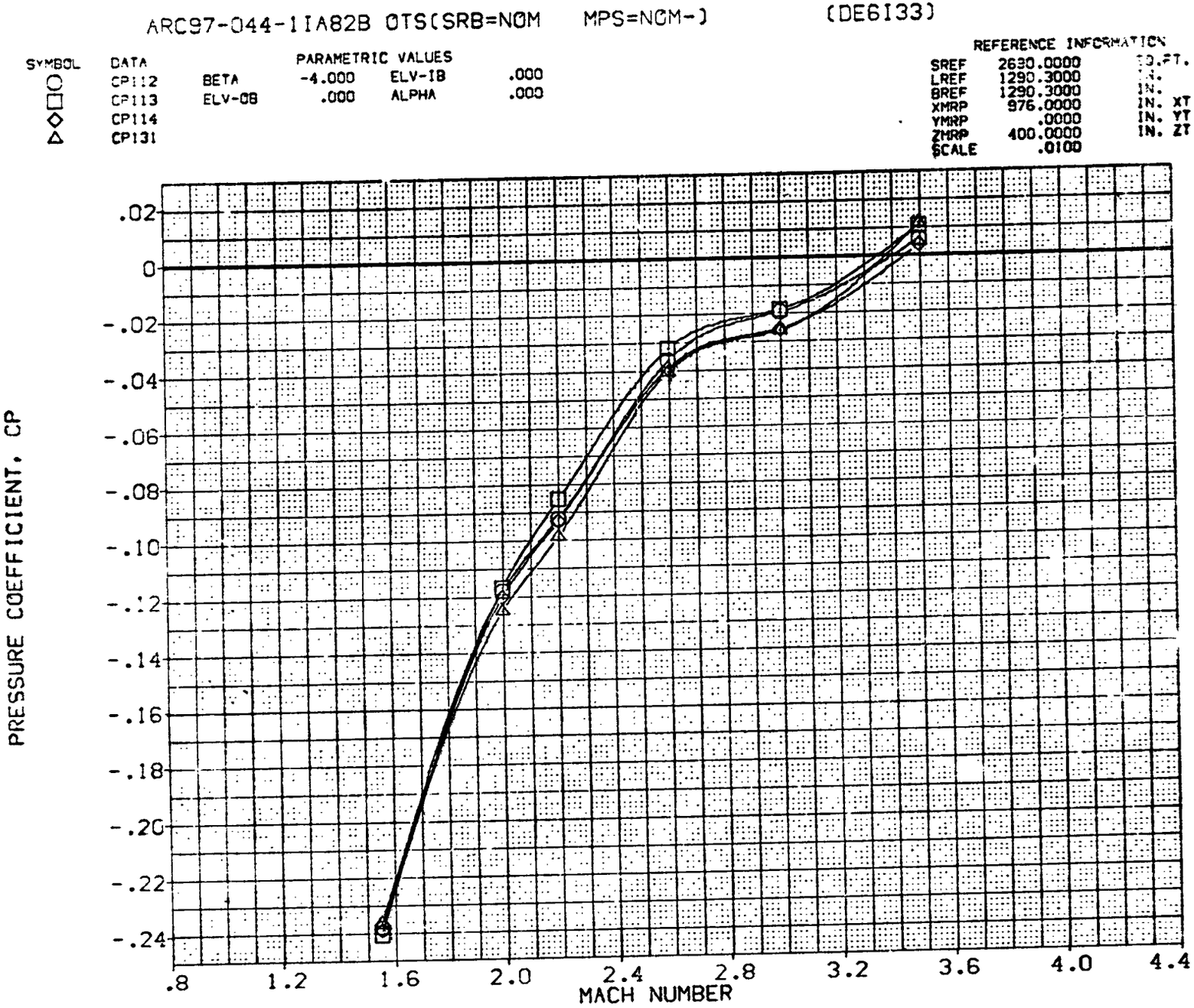


FIG. 70 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM-

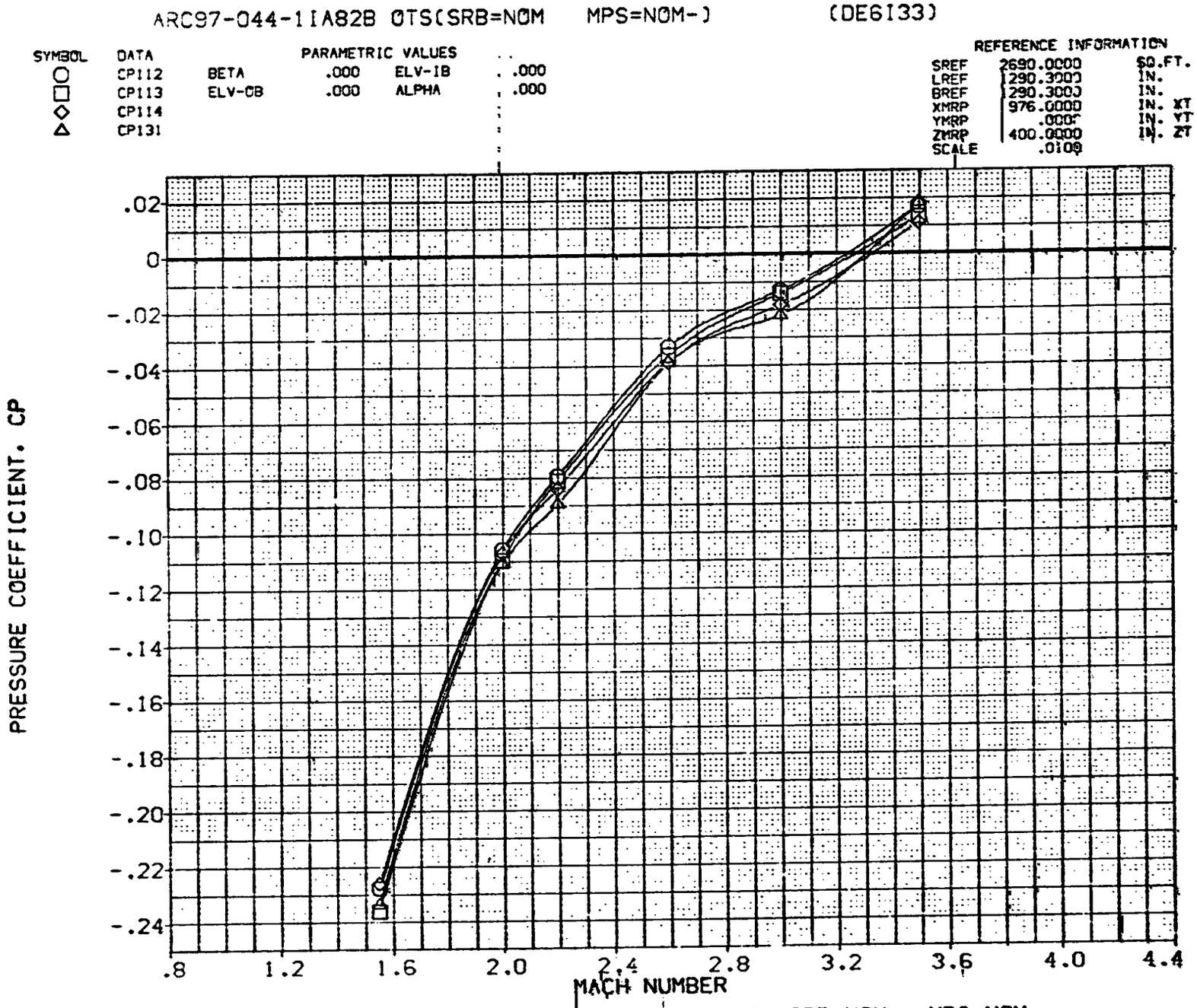


FIG. 70 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM-

ARC97-044-11A82B OTS(SRB=NOM MPS=NOM-) (DE6I33)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP112	BETA	4.000	ELV-IB	.000
◇	CP113	ELV-OB	.000	ALPHA	.000
□	CP114				
△	CP131				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

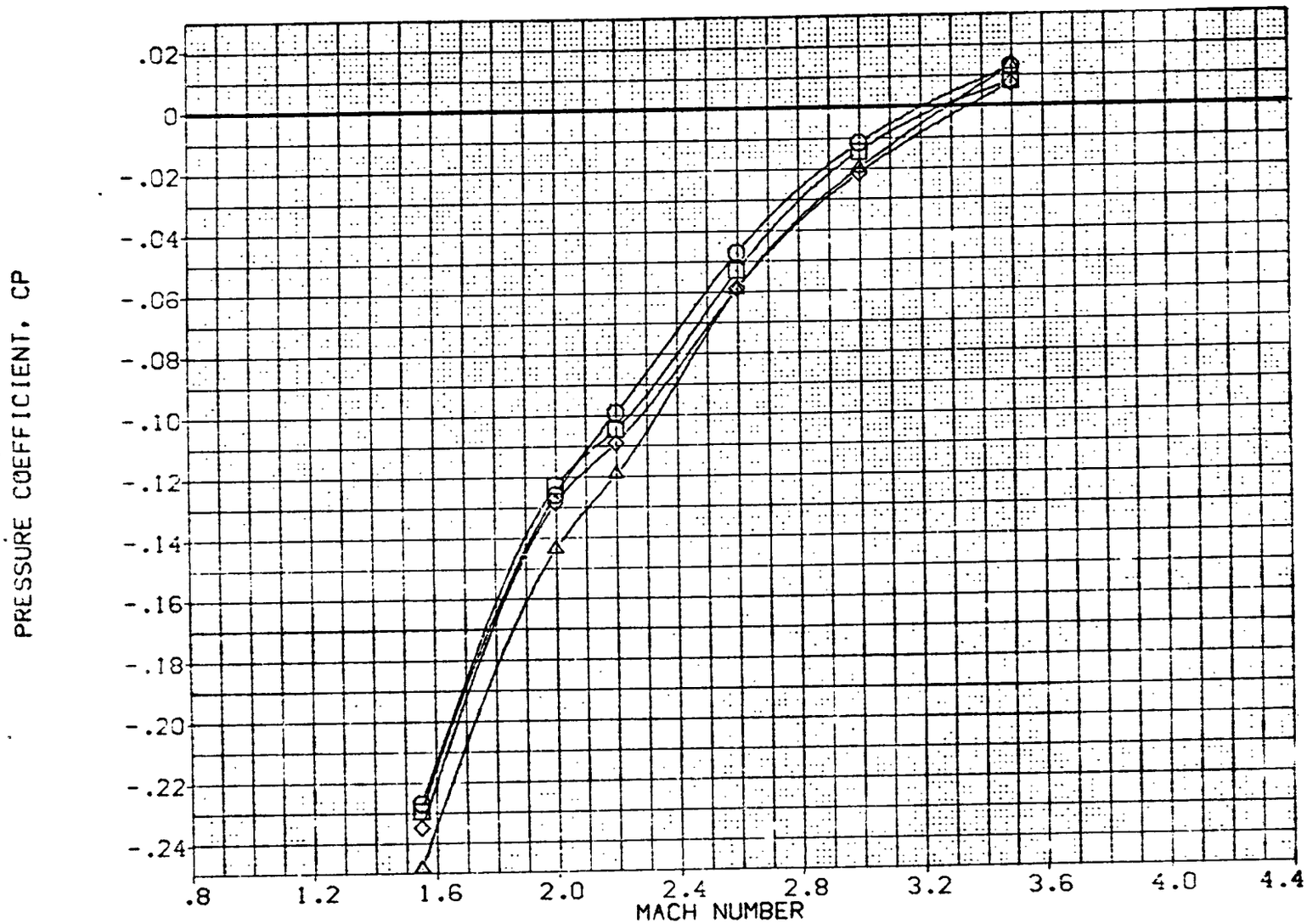


FIG. 70 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM-

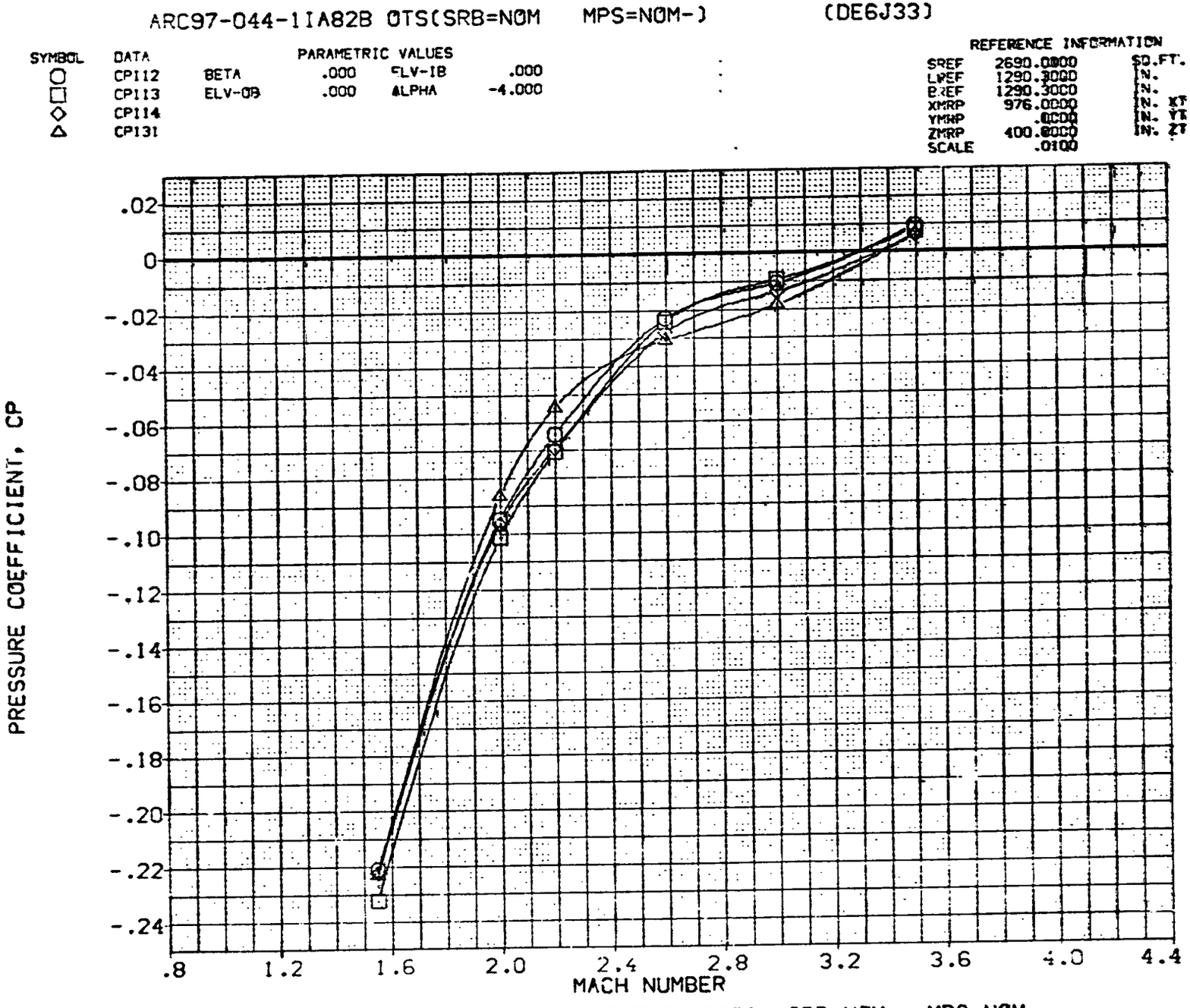


FIG. 70 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM-

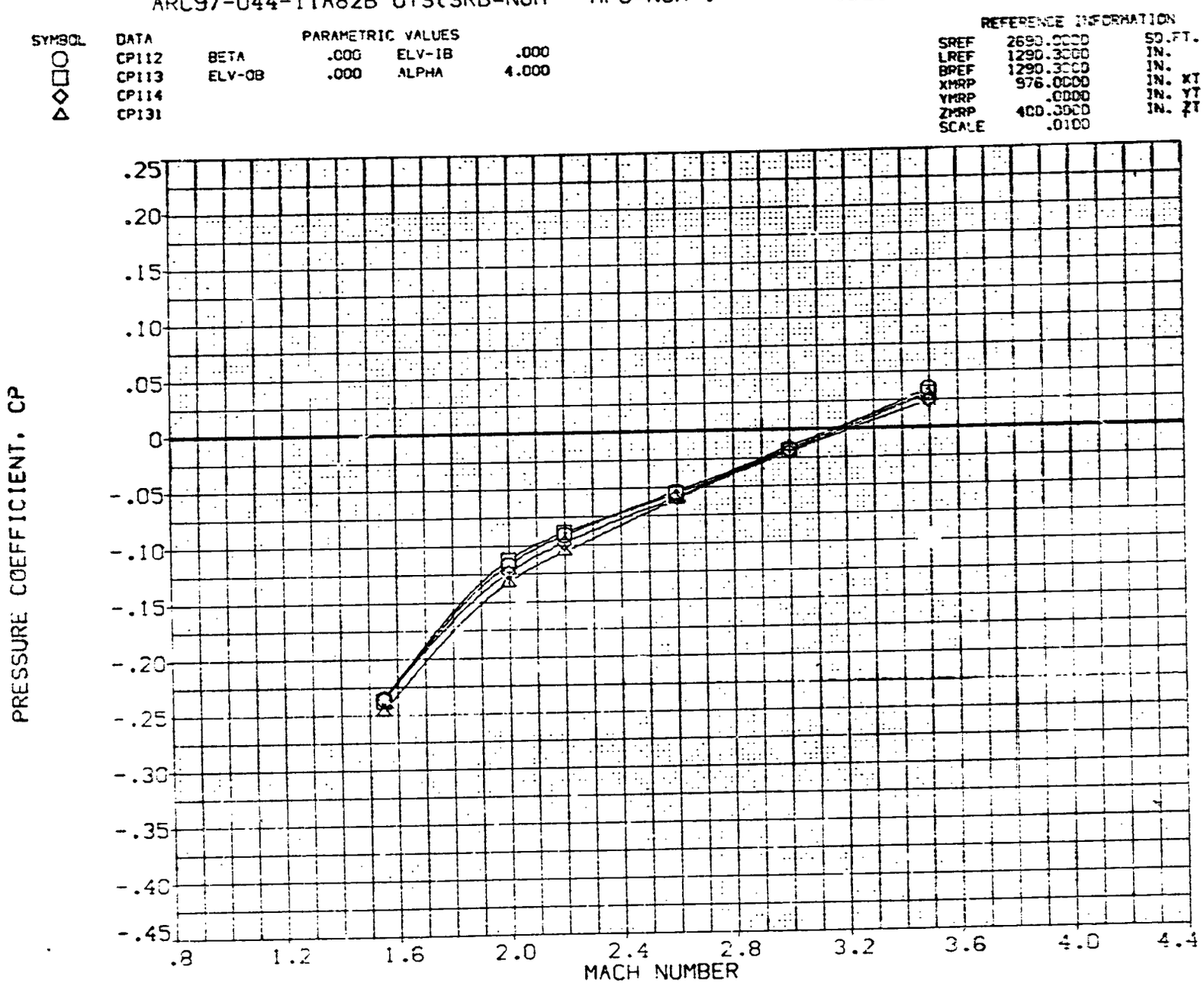


FIG. 70 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM-

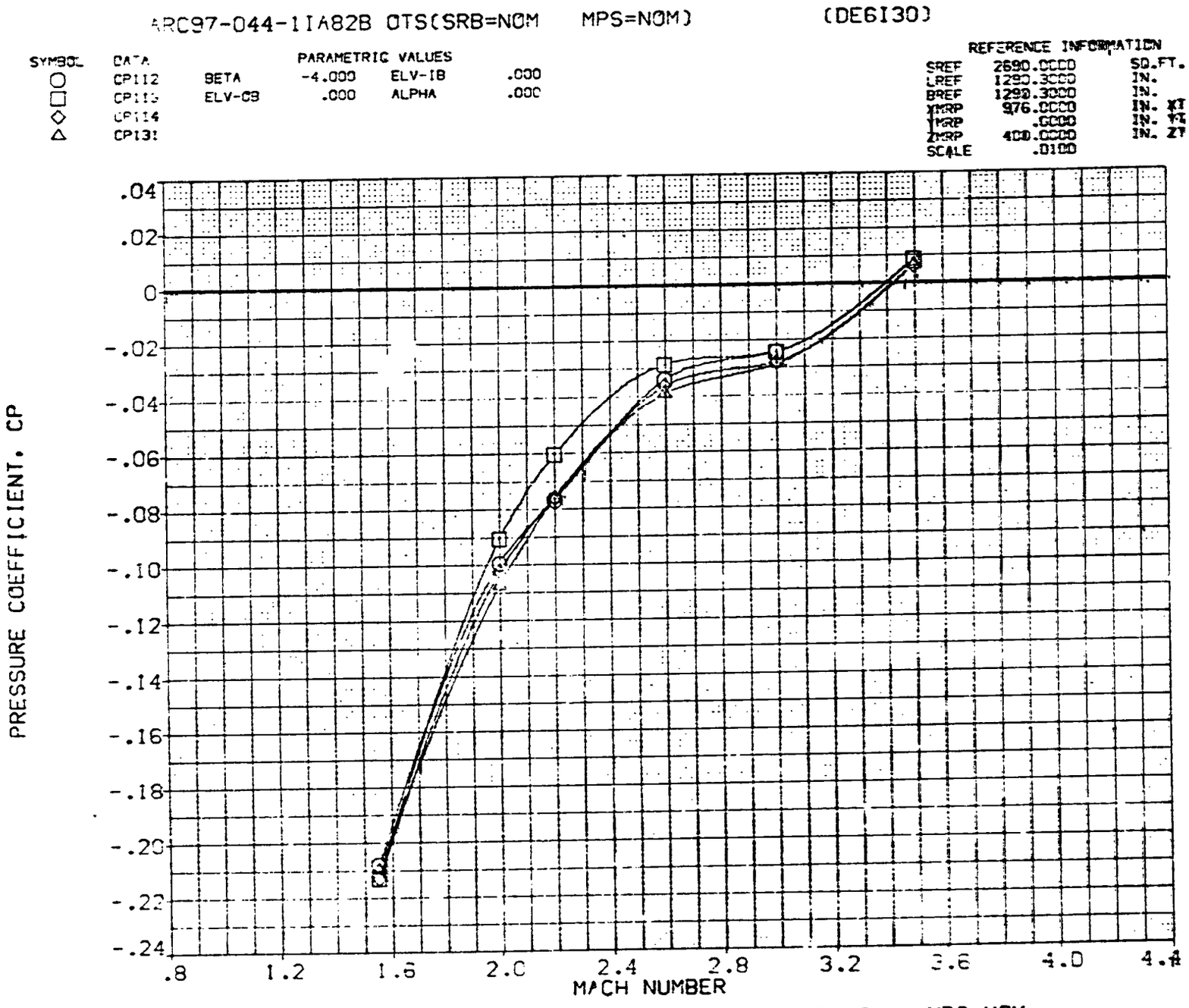


FIG. 71 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM. MPS=NOM

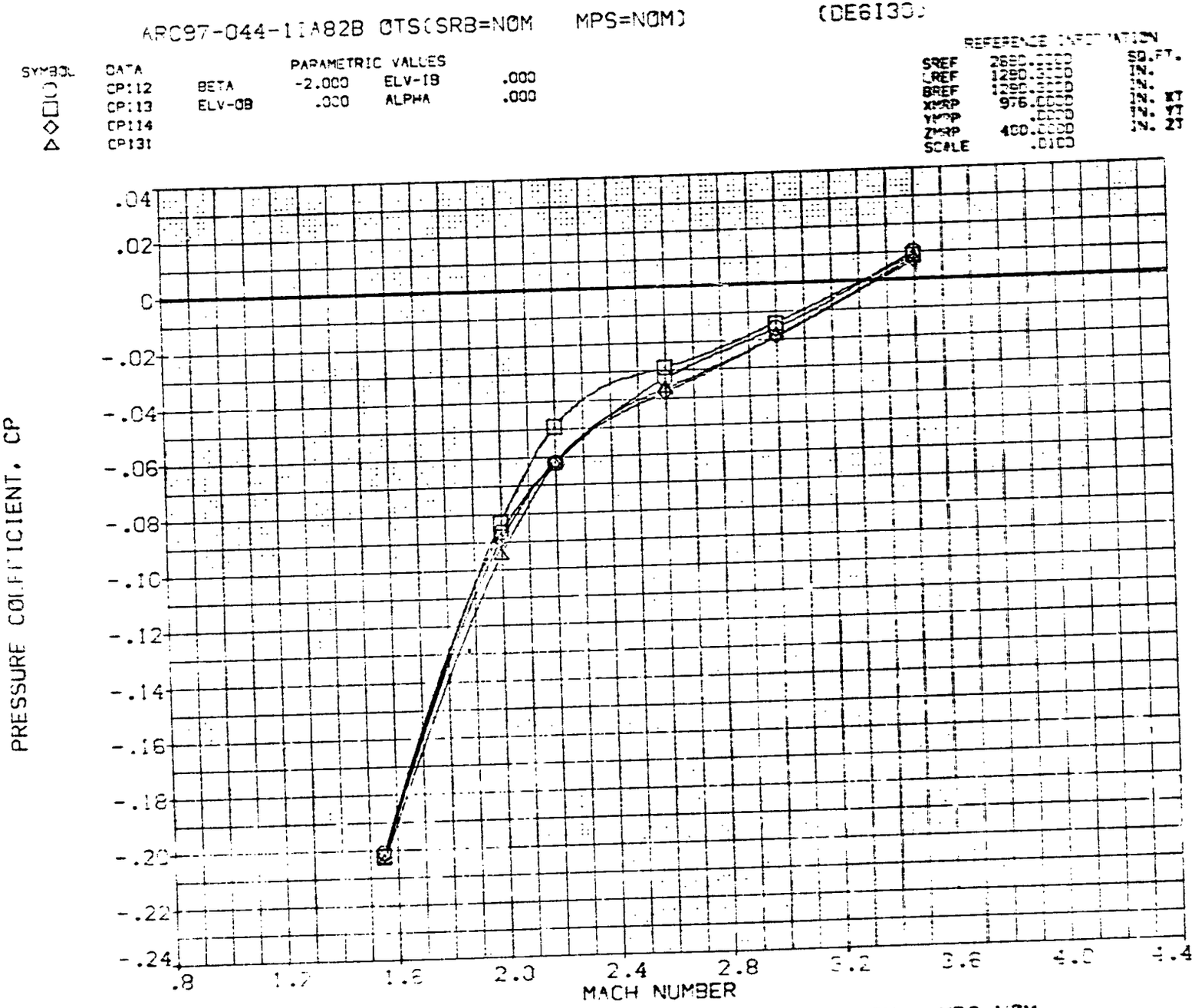


FIG. 71 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM

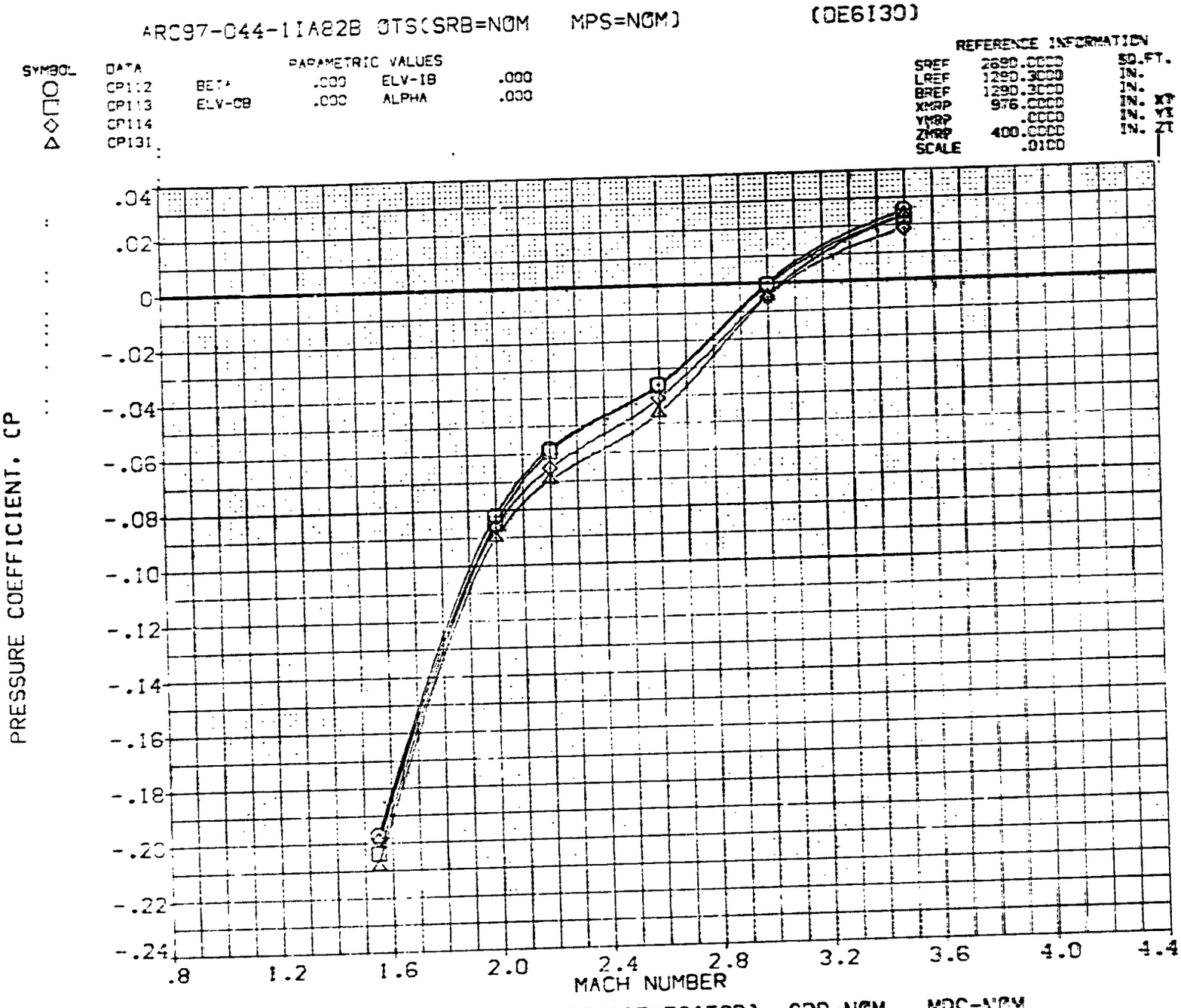


FIG. 71 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM

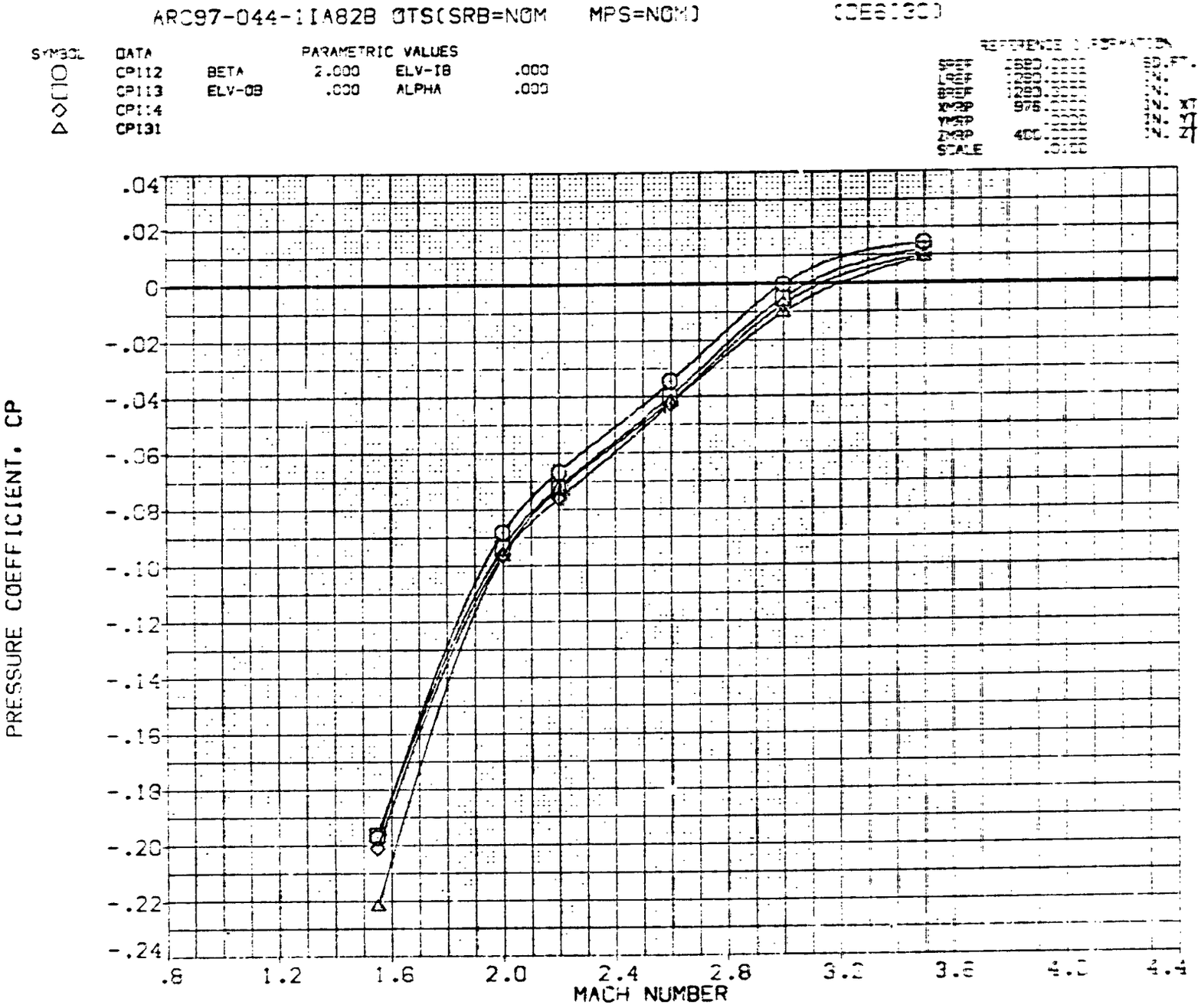


FIG. 71 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM

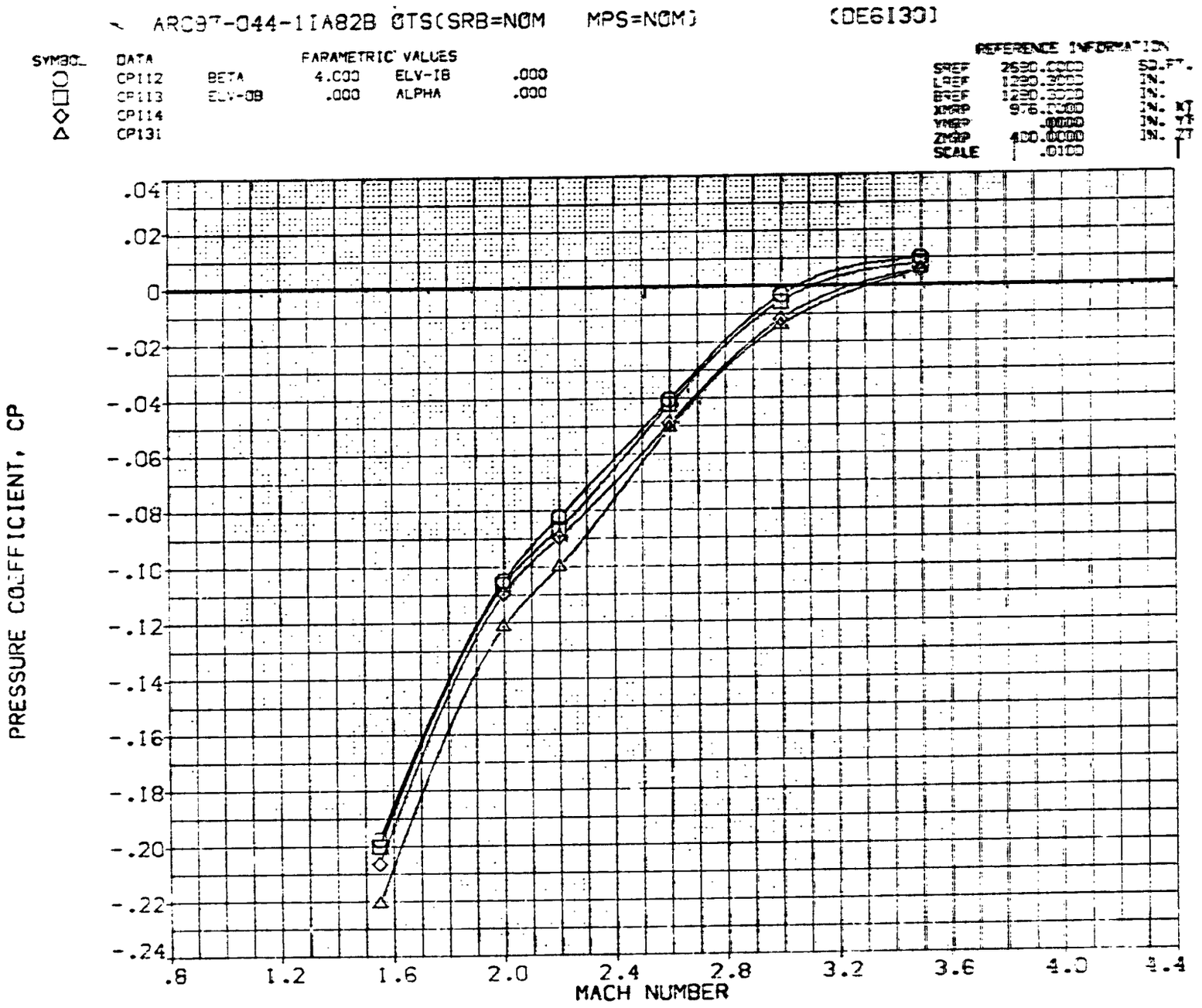


FIG. 71 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM

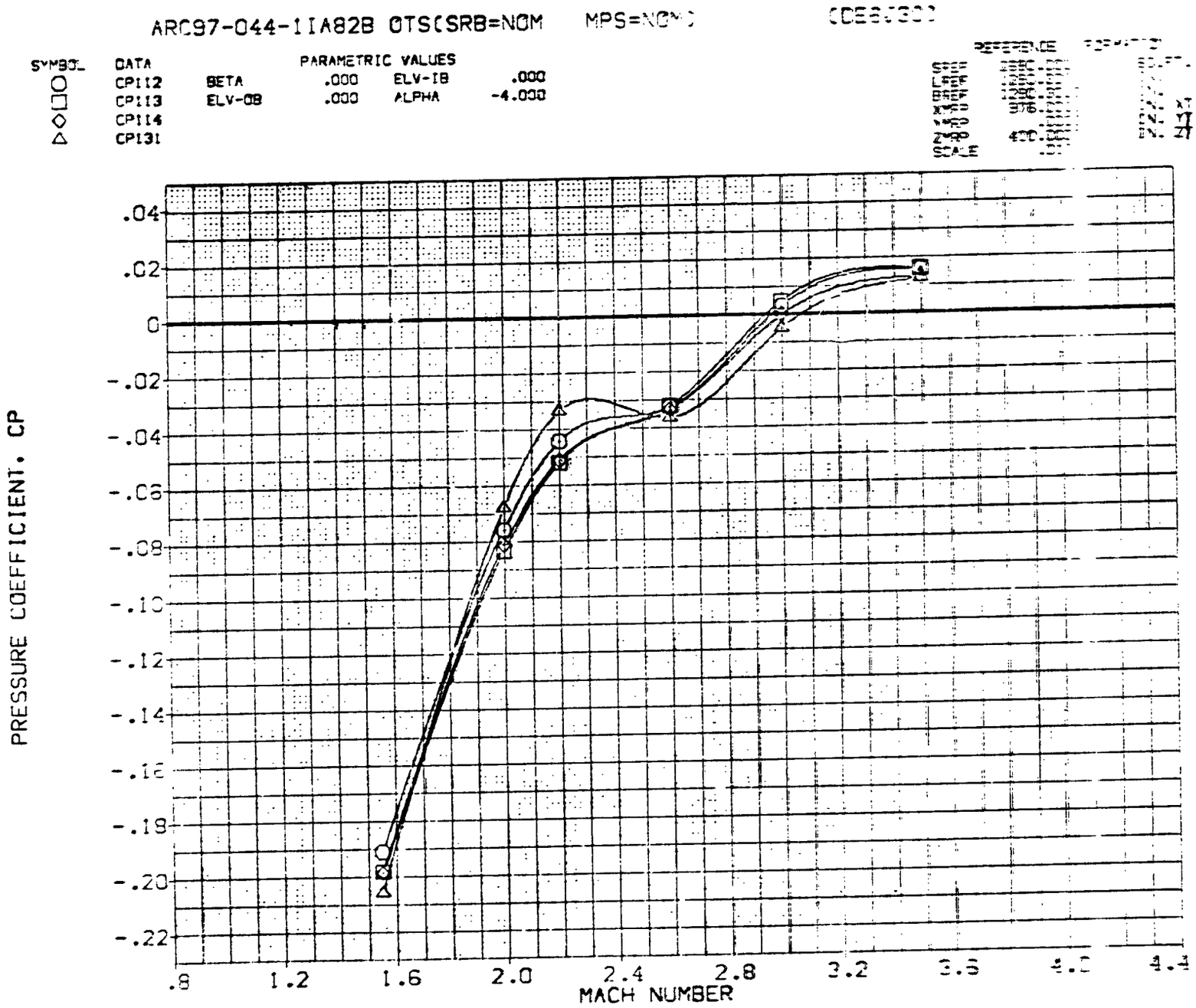


FIG. 71 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM

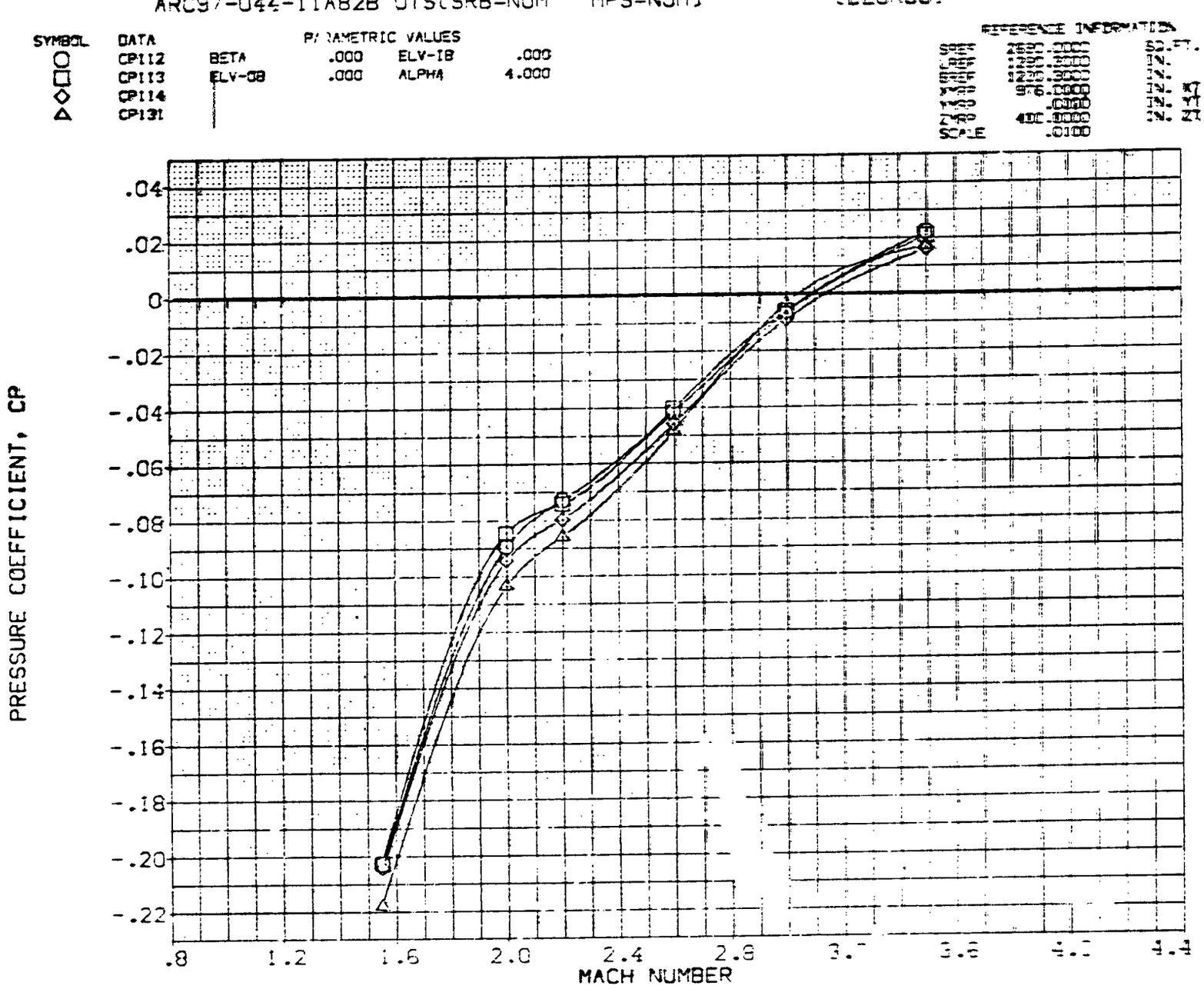


FIG. 71 ORBITER BASE PRESSURE COEFFICIENTS(CP) SRB=NOM, MPS=NOM

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM+) (DE6I34)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CPI12	BETA	-4.000	ELV-IB	.000
□	CPI13	ELV-CB	.000	ALPHA	.000
◇	CPI14				
△	CPI31				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

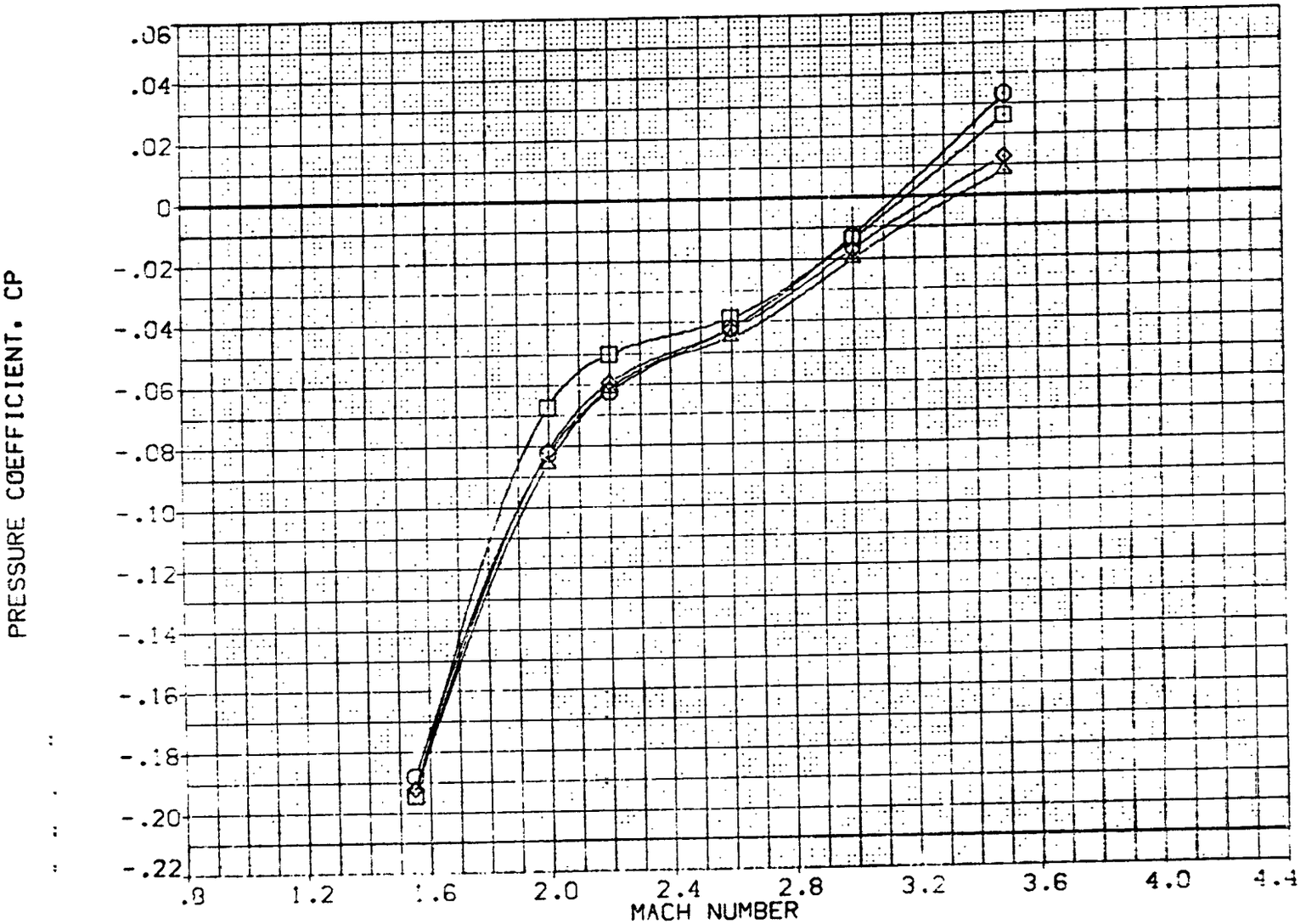


FIG. 72 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM+

AF C97-C44-IIA82B OTS(SRB=NOM MPS=NOM+) (DE6I34)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP112	BETA	.000	ELV-IB	.000
□	CP113	ELV-OB	.000	ALPHA	.000
◇	CP114				
△	CP131				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3600	IN.
BREF	1290.3600	IN.
XMRP	976.0000	IN. XT
YMRP	1.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

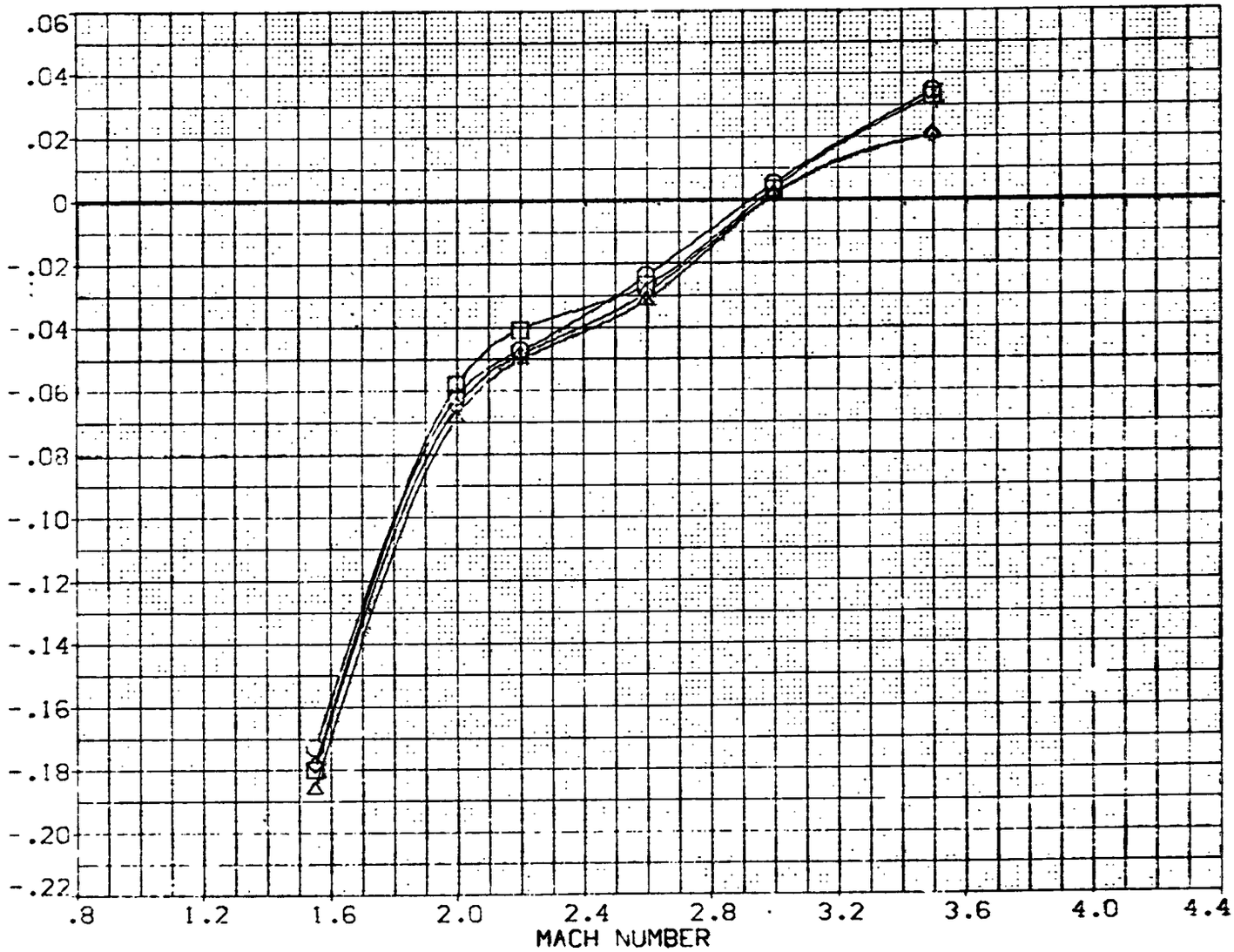


FIG. 72 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM+

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM+) (DE6I34)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP112	BETA	4.000	ELV-IB	.000
□	CP113	ELV-OB	.000	ALPHA	.000
◇	CP114				
△	CP131				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZW
SCALE	.0100	

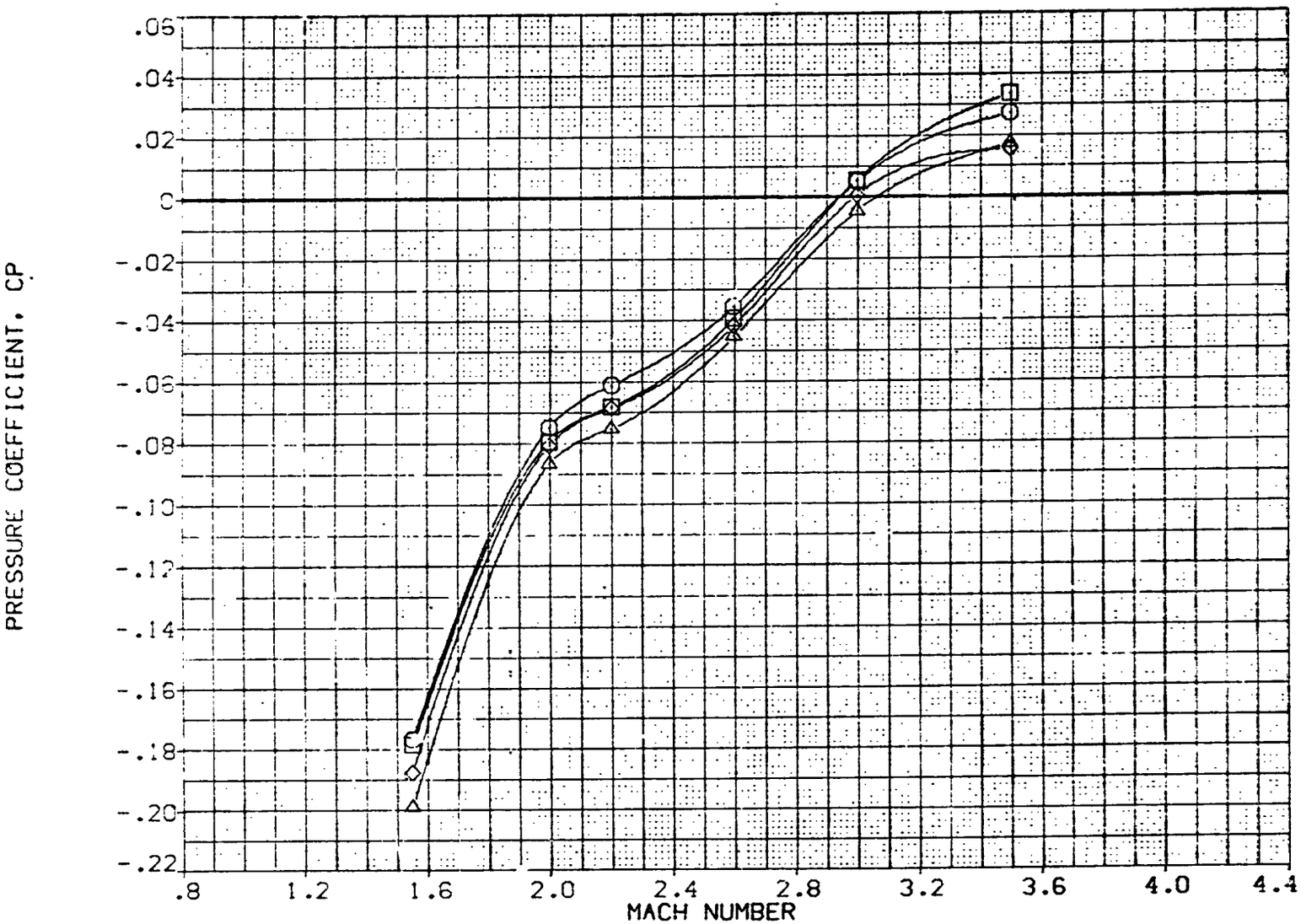


FIG. 72 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM+

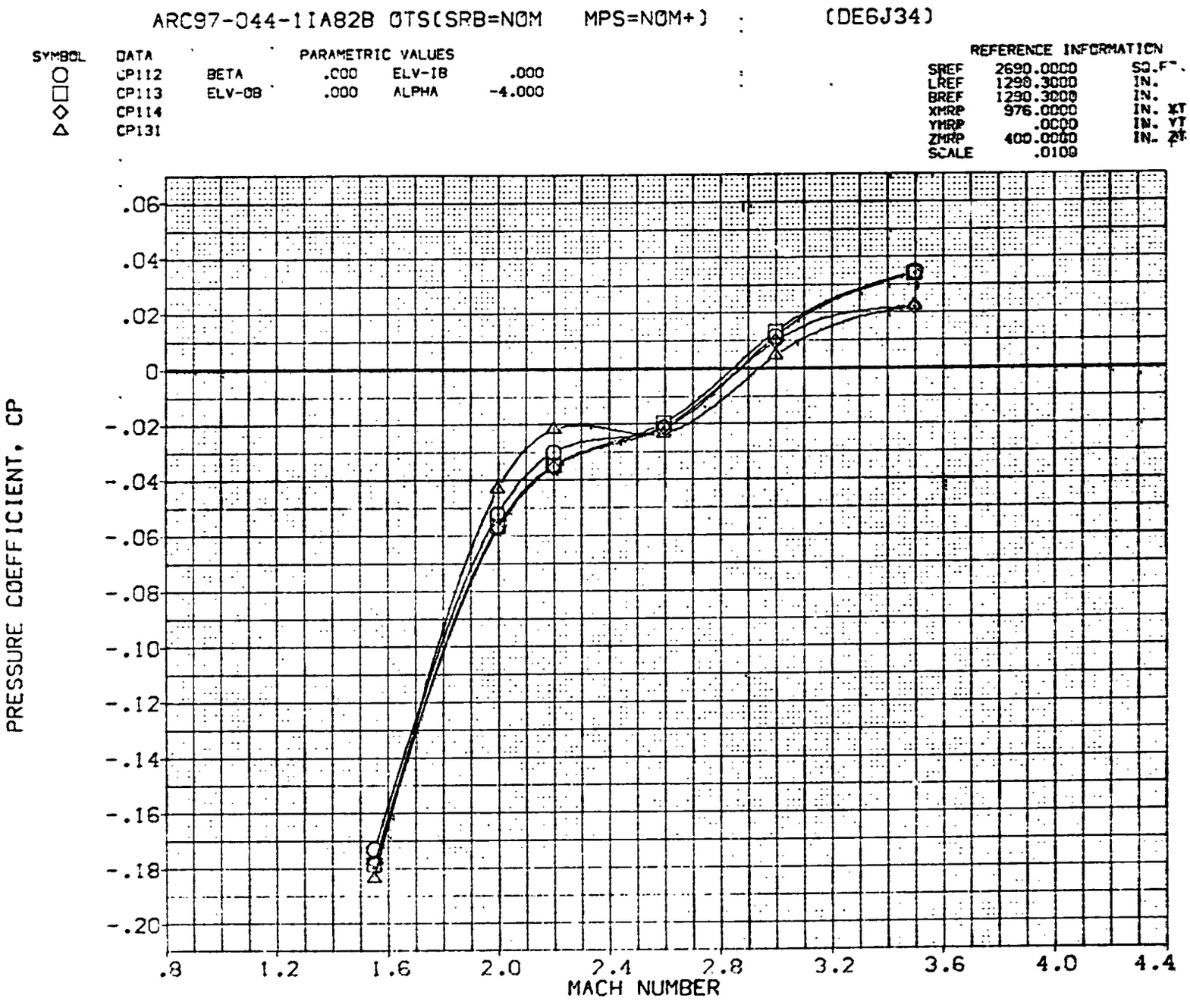


FIG. 72 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=NOM, MPS=NOM+

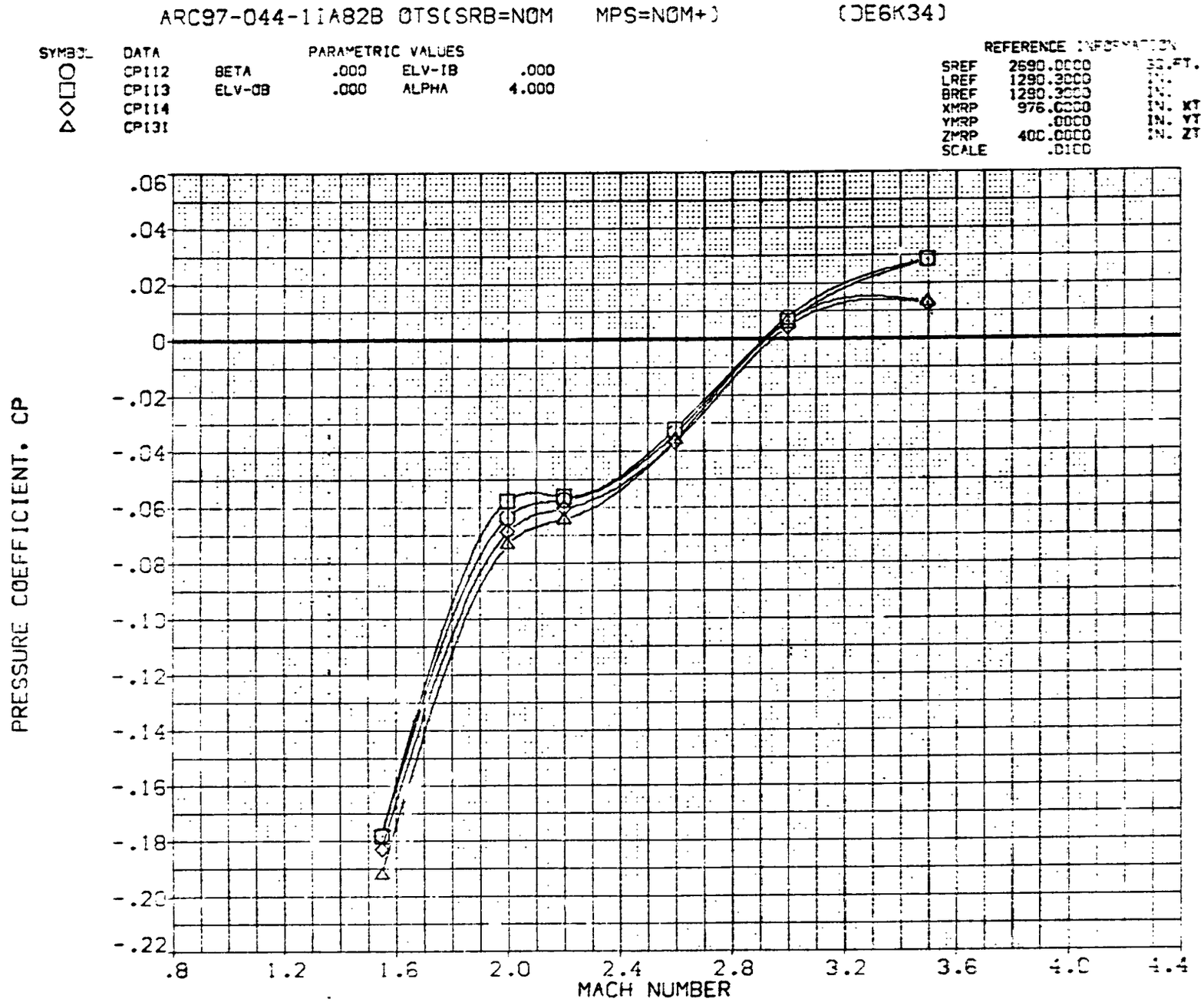


FIG. 72 ORBITER BASE PRESSURE COEFFICIENTS(TOP) SRB=N0M, MPS=N0M+

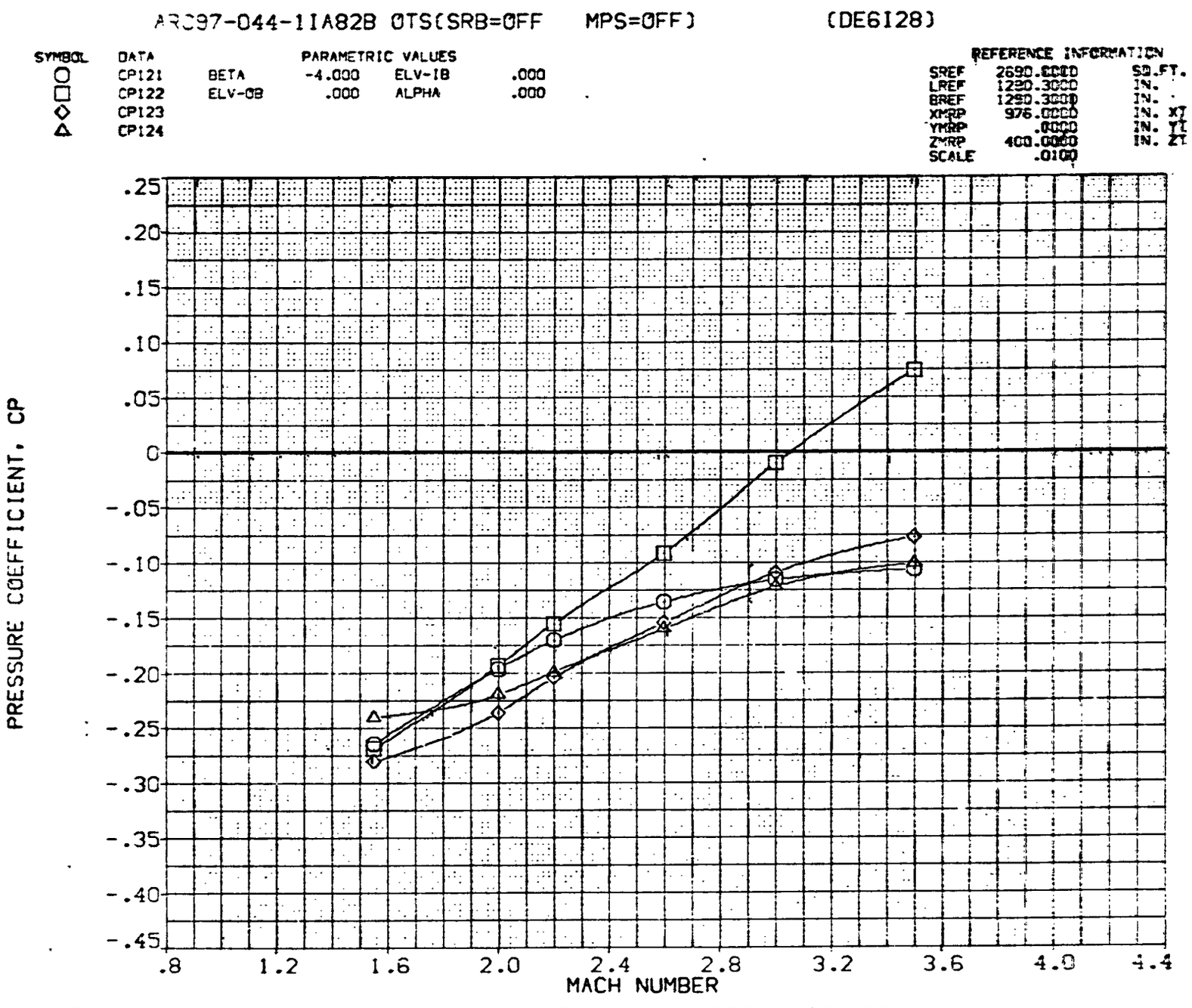


FIG. 73 OMS BASE PRESSURE COEFFICIENTS, SRB=OFF, MPS=OFF

ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF) (DE6I28)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP121	BETA	-2.000	ELV-IB	.000
□	CP122	ELV-OB	.000	ALPHA	.000
◇	CP123				
△	CP124				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

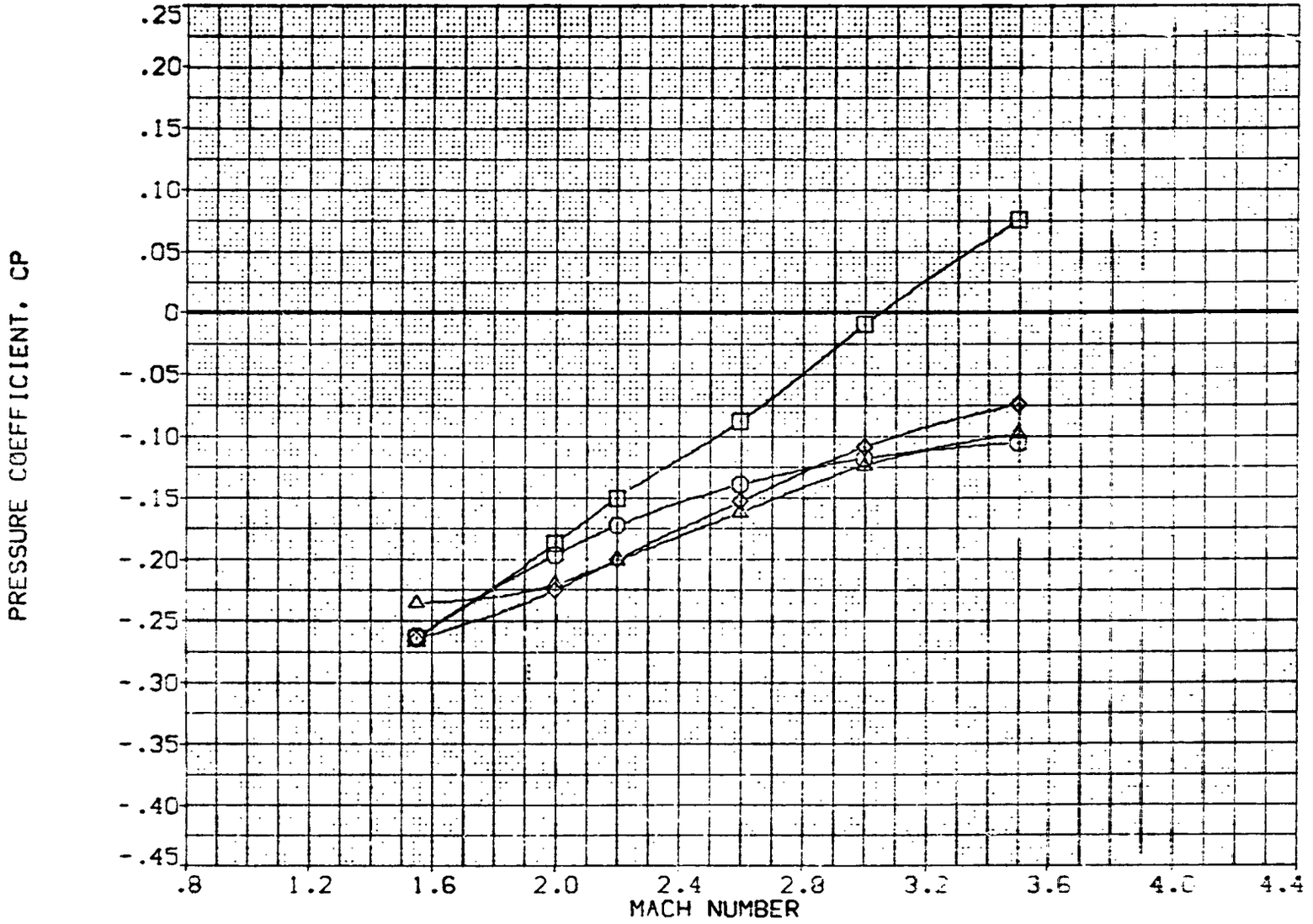


FIG. 73 OMS BASE PRESSURE COEFFICIENTS, SRB=OFF, MPS=OFF

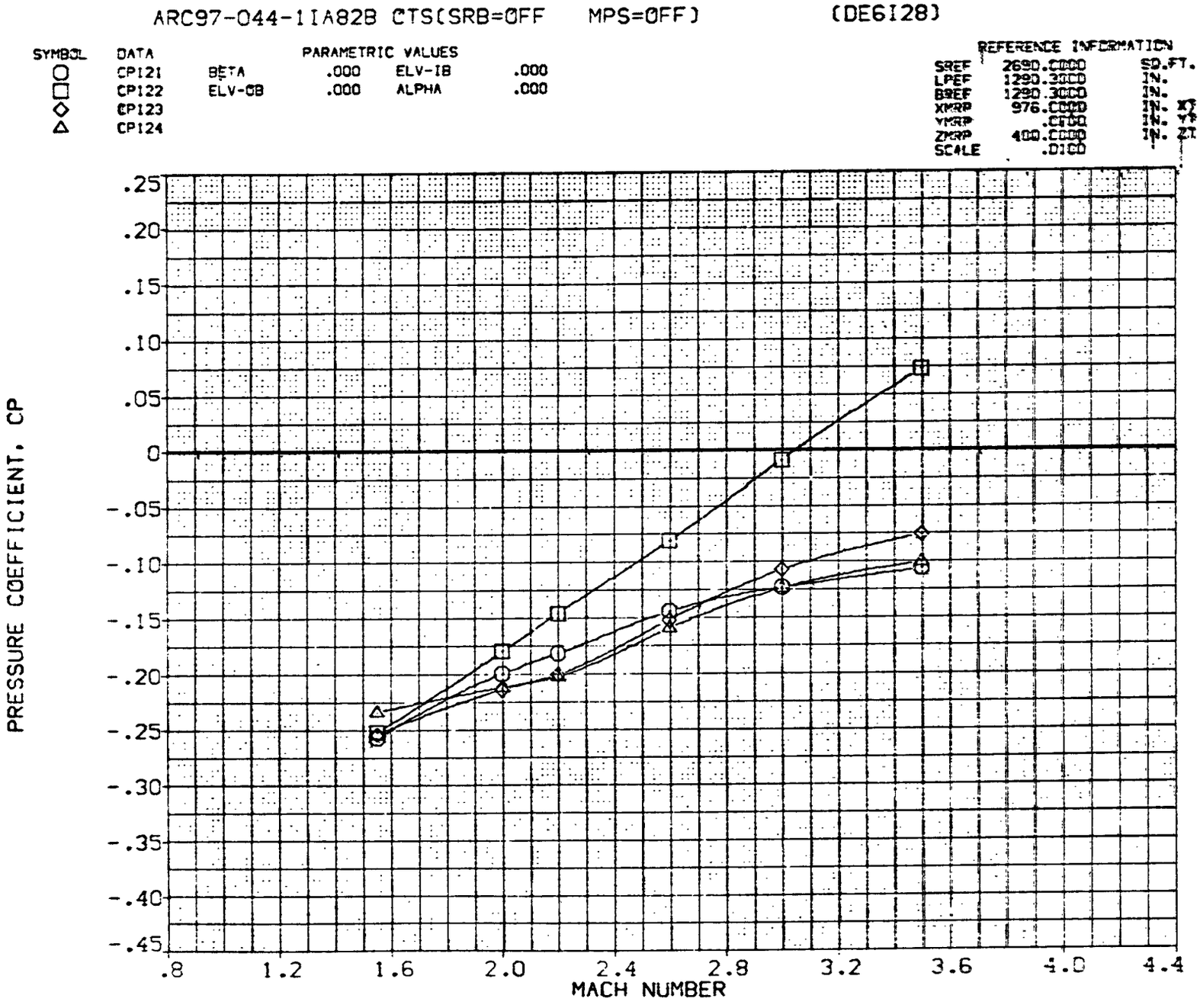


FIG. 73 OMS BASE PRESSURE COEFFICIENTS, SRB=OFF, MPS=OFF

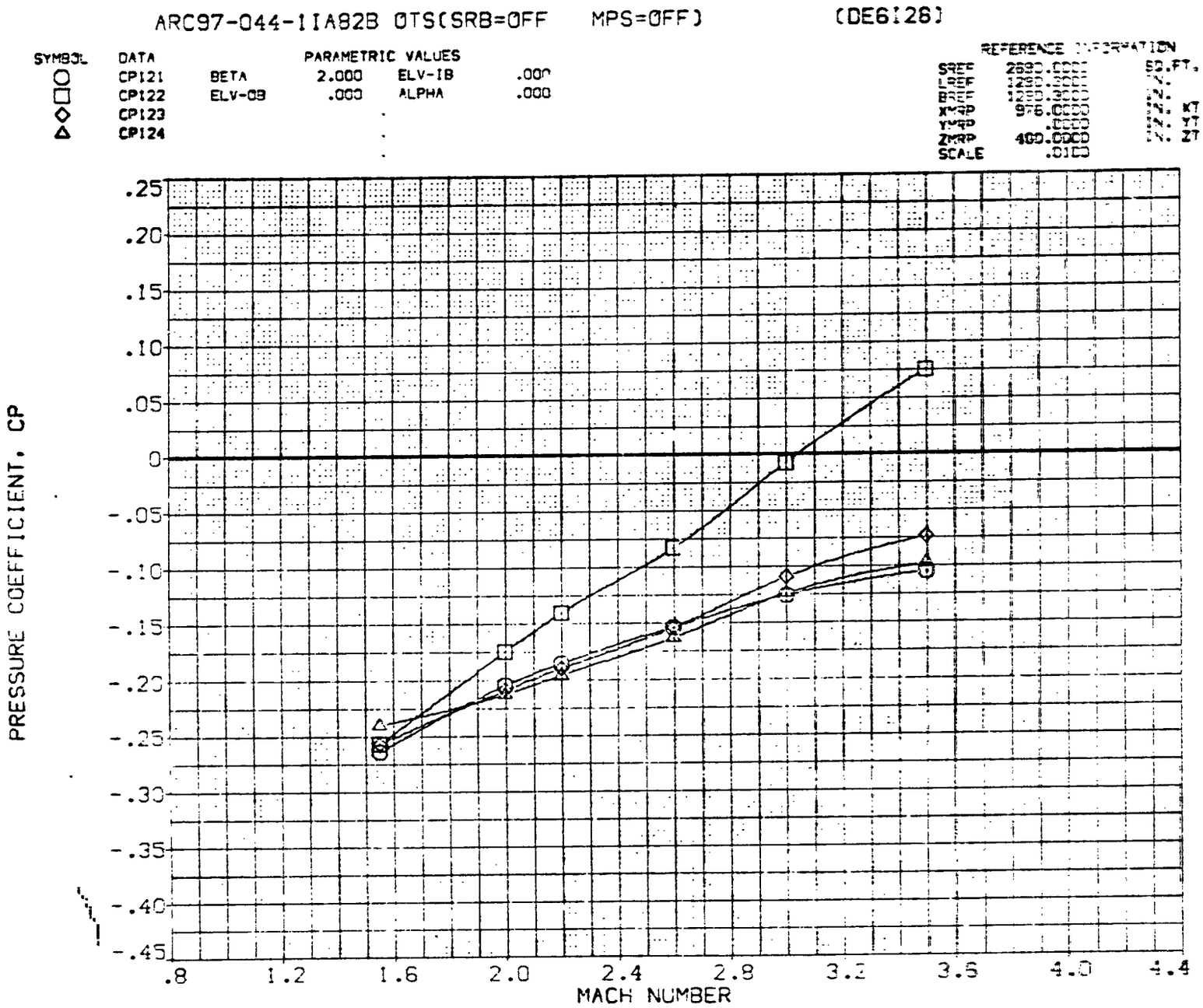


FIG. 73 OMS BASE PRESSURE COEFFICIENTS, SRB=OFF, MPS=OFF

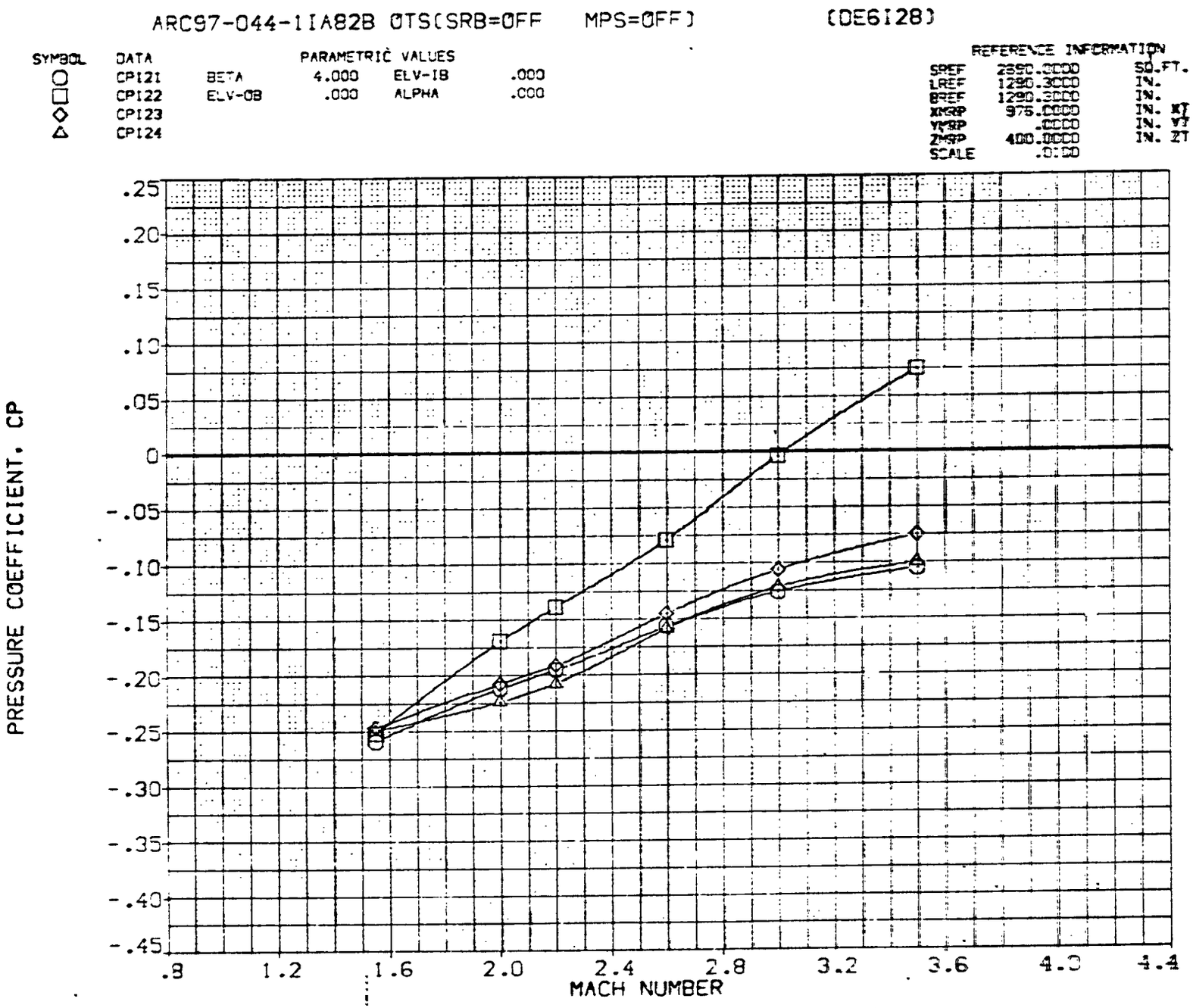


FIG. 73 OMS BASE PRESSURE COEFFICIENTS, SRB=OFF, MPS=OFF

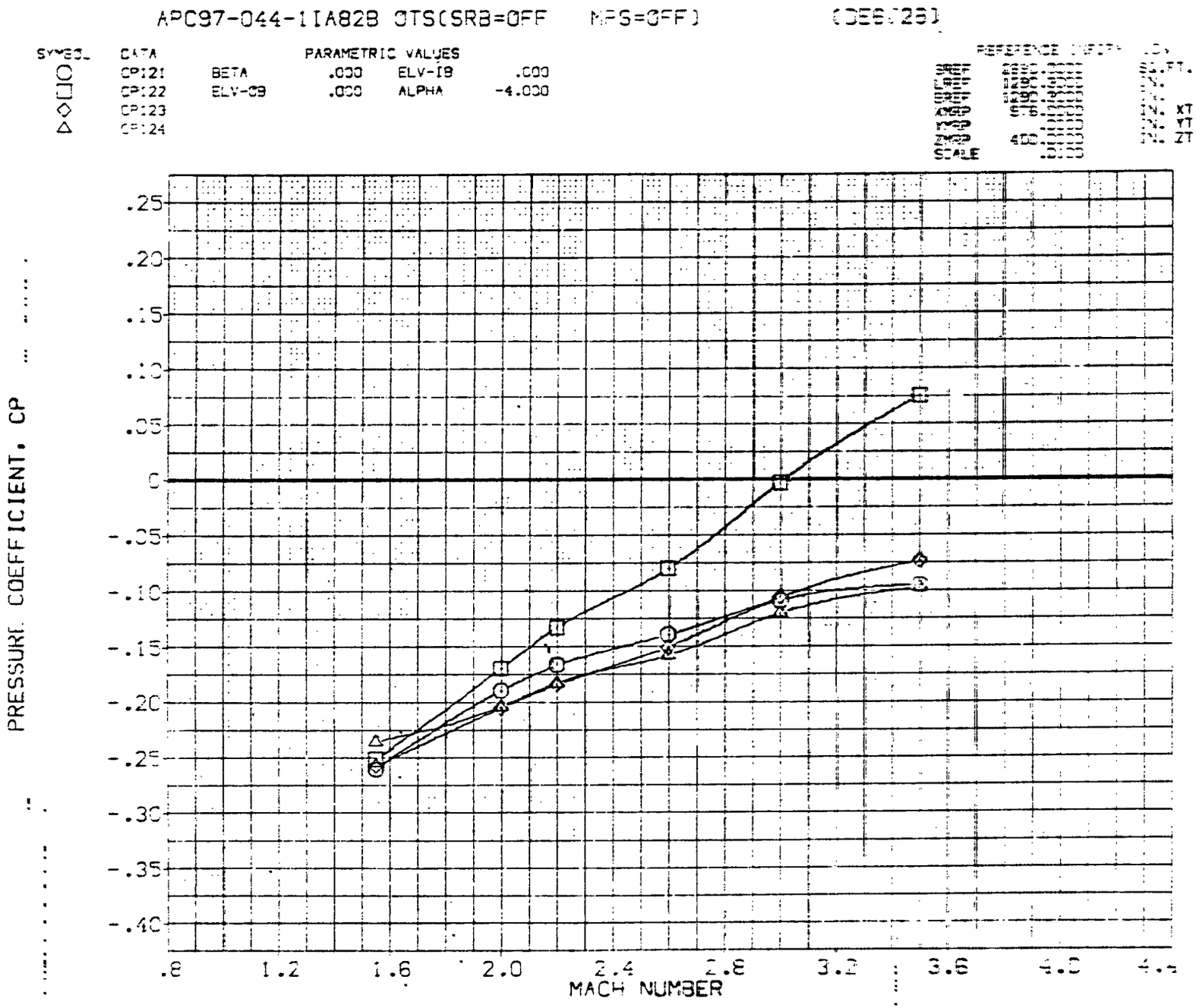


FIG. 73 OMS BASE PRESSURE COEFFICIENTS, SRB=OFF, MPS=OFF

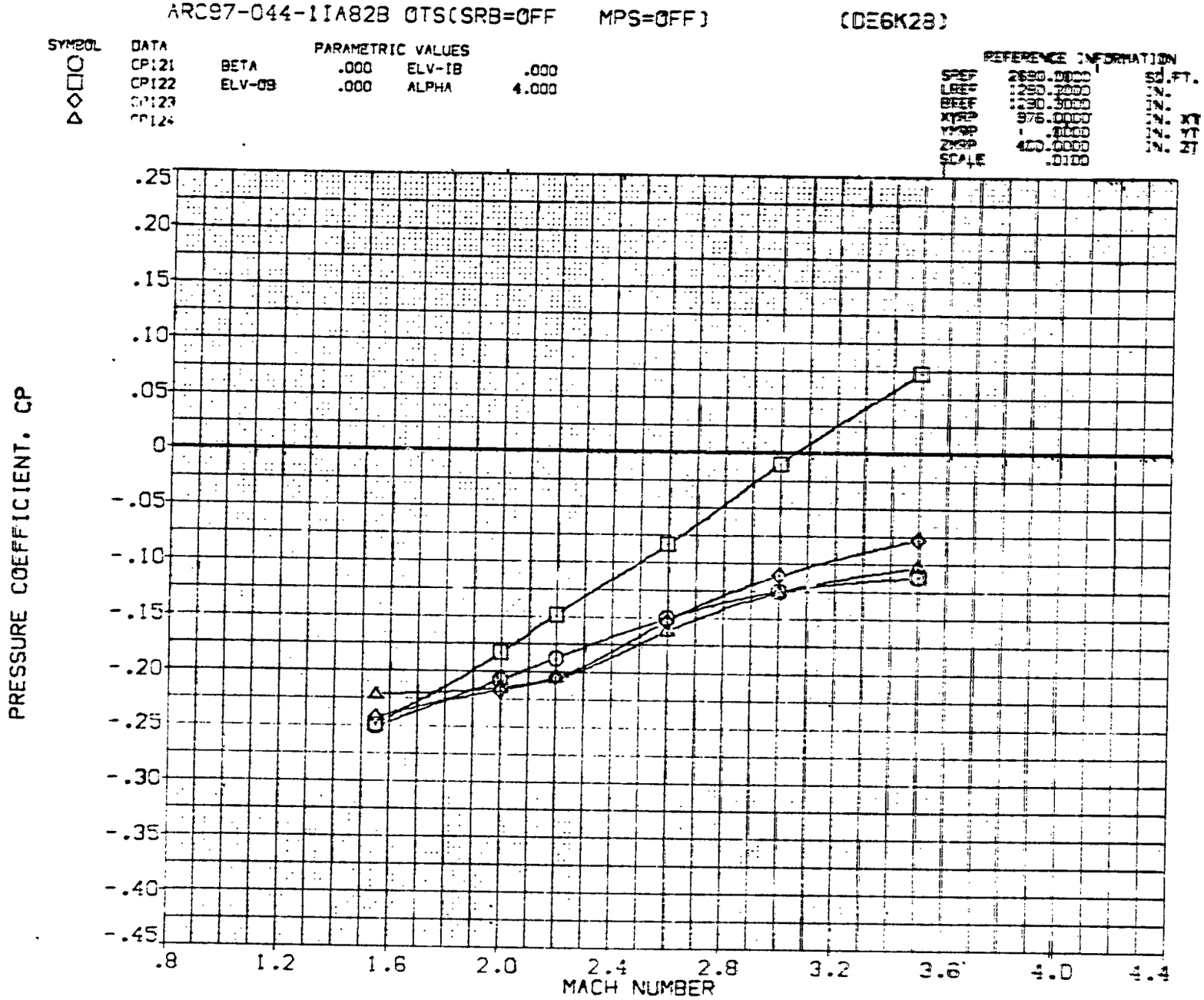


FIG. 73 OMS BASE PRESSURE COEFFICIENTS. SRB=OFF, MPS=OFF

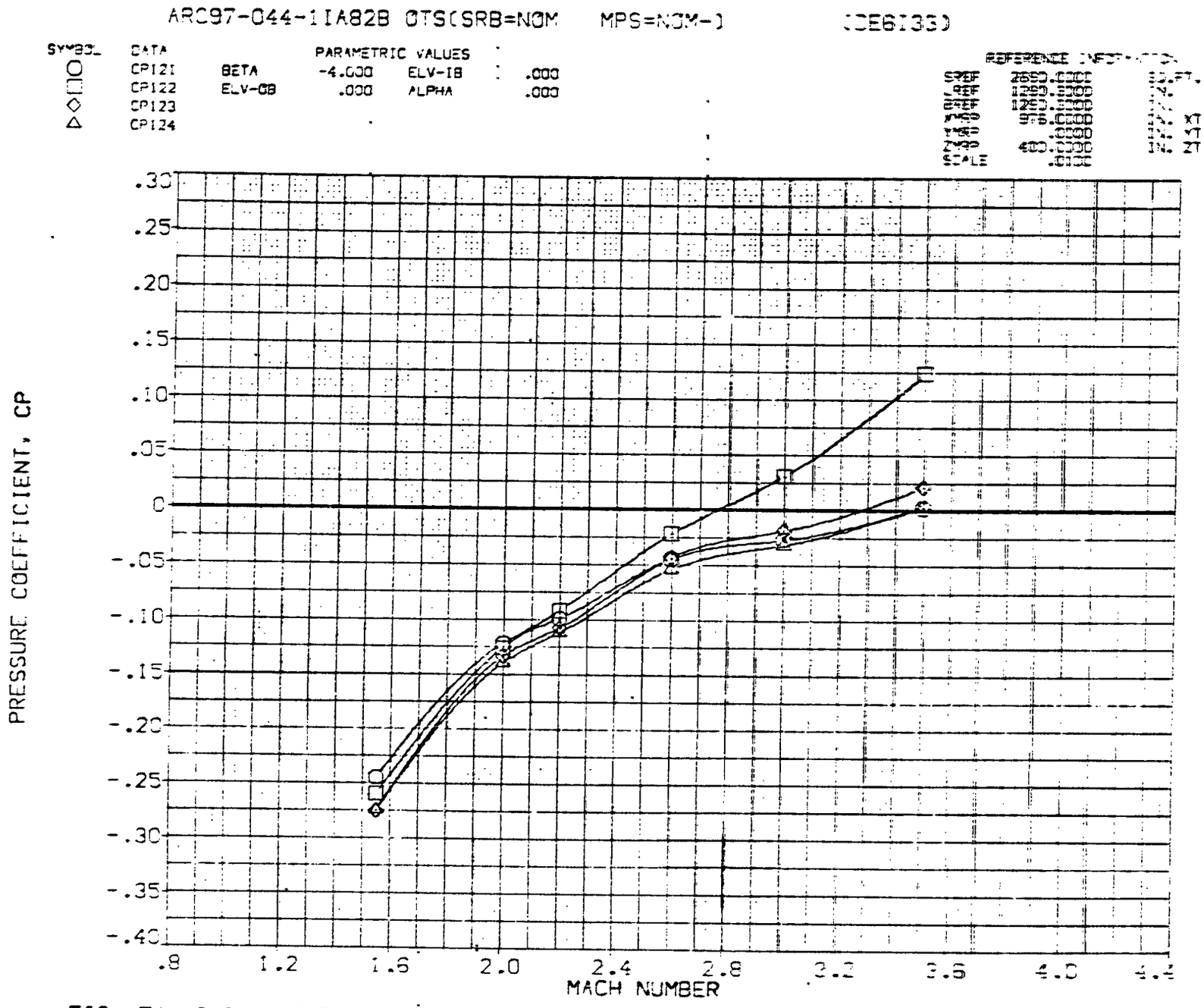


FIG. 74 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM-

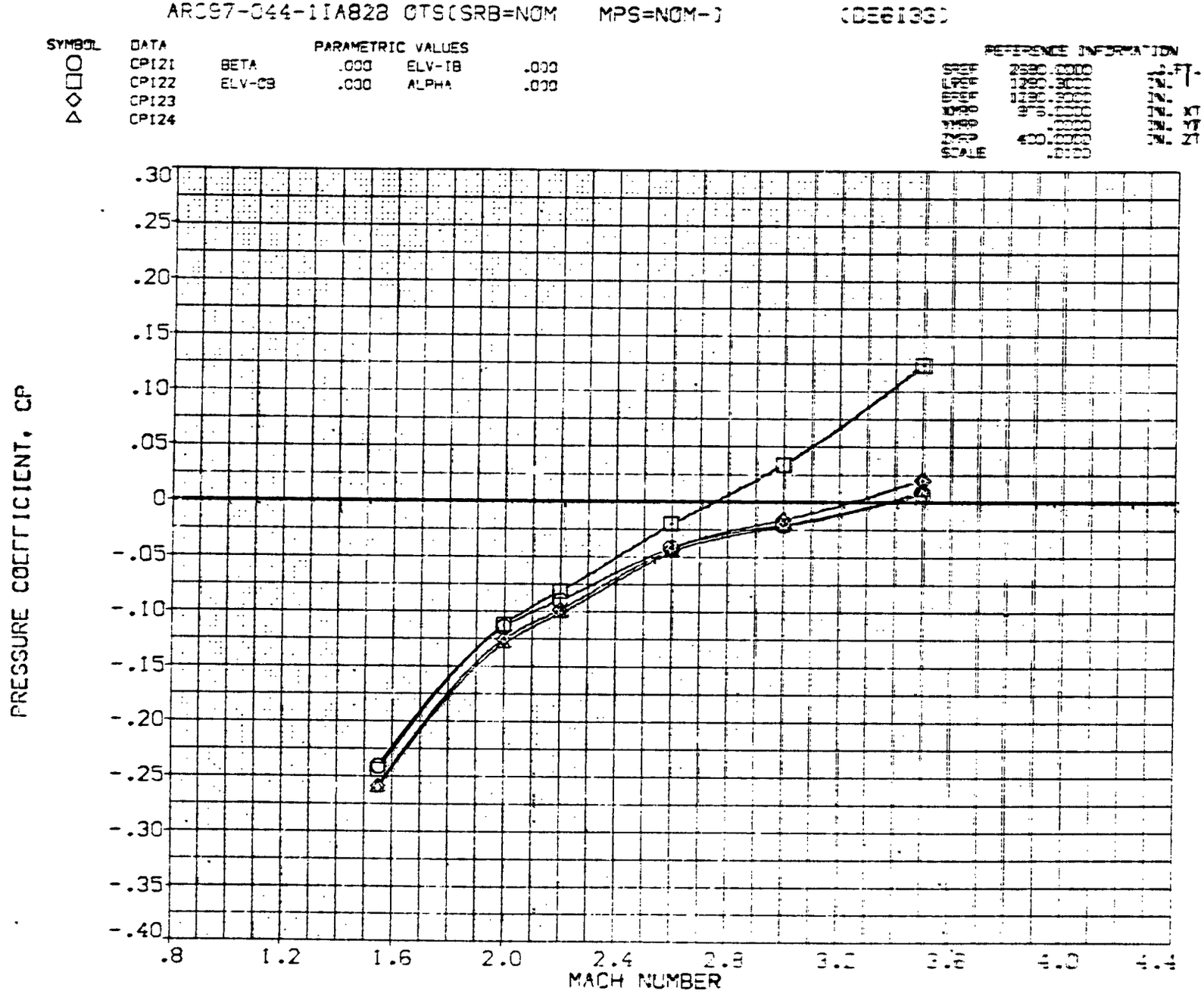


FIG. 74 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM-

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM-) (DE6I33)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP121	BETA	4.000	ELV-IB	.000
□	CP122	ELV-OB	.000	ALPHA	.000
◇	CP123				
△	CP124				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

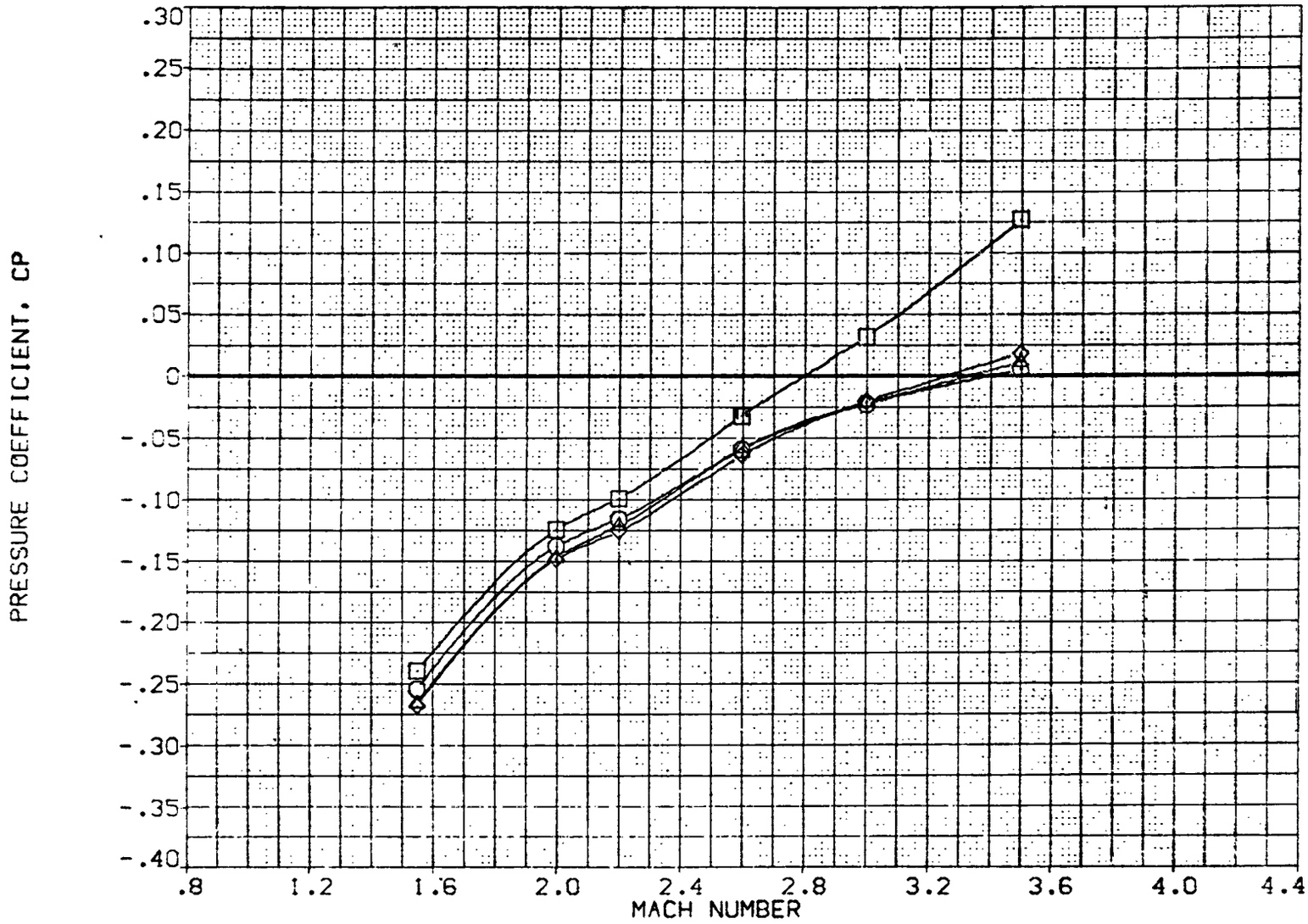


FIG. 74 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM-

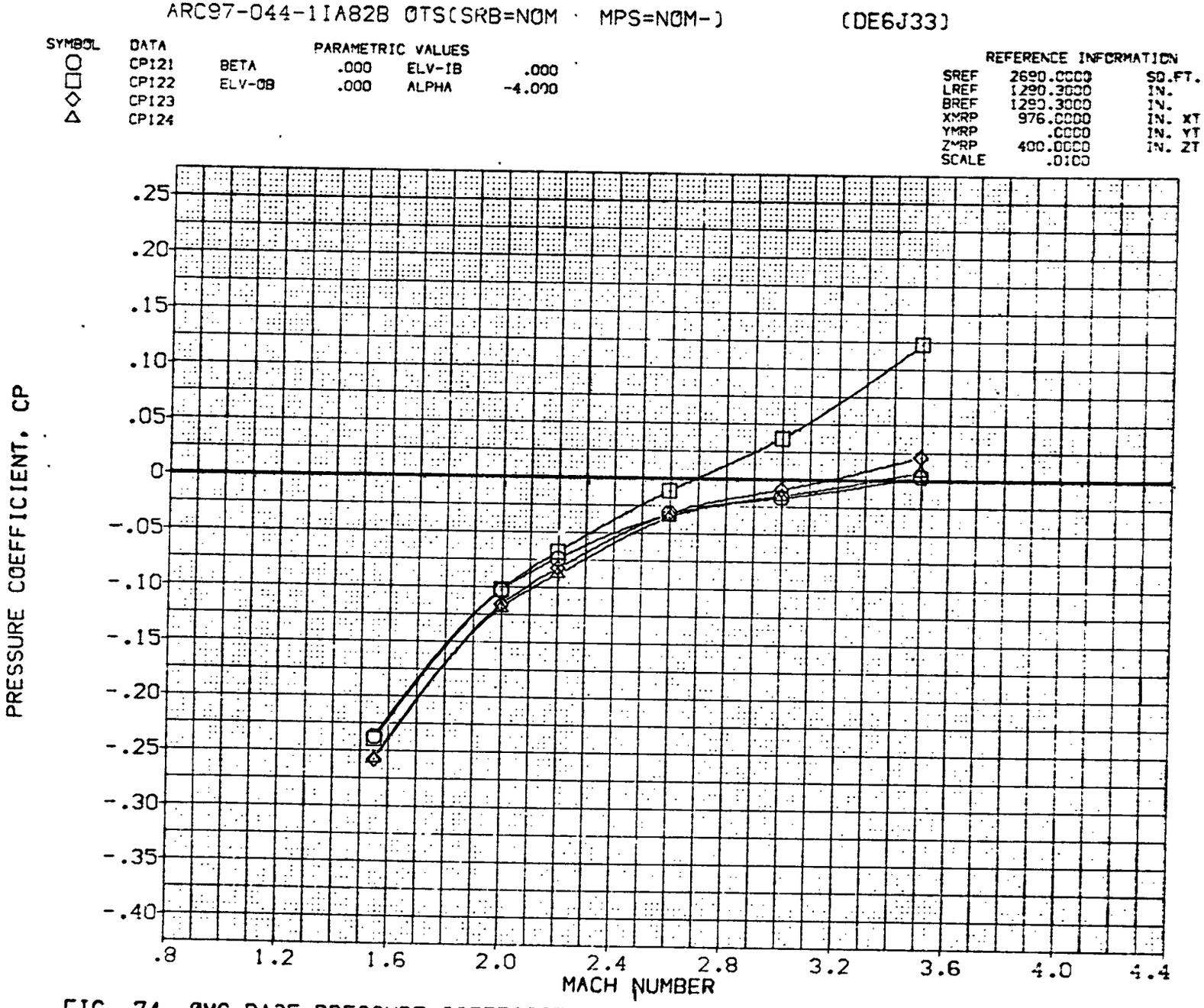


FIG. 74 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM-

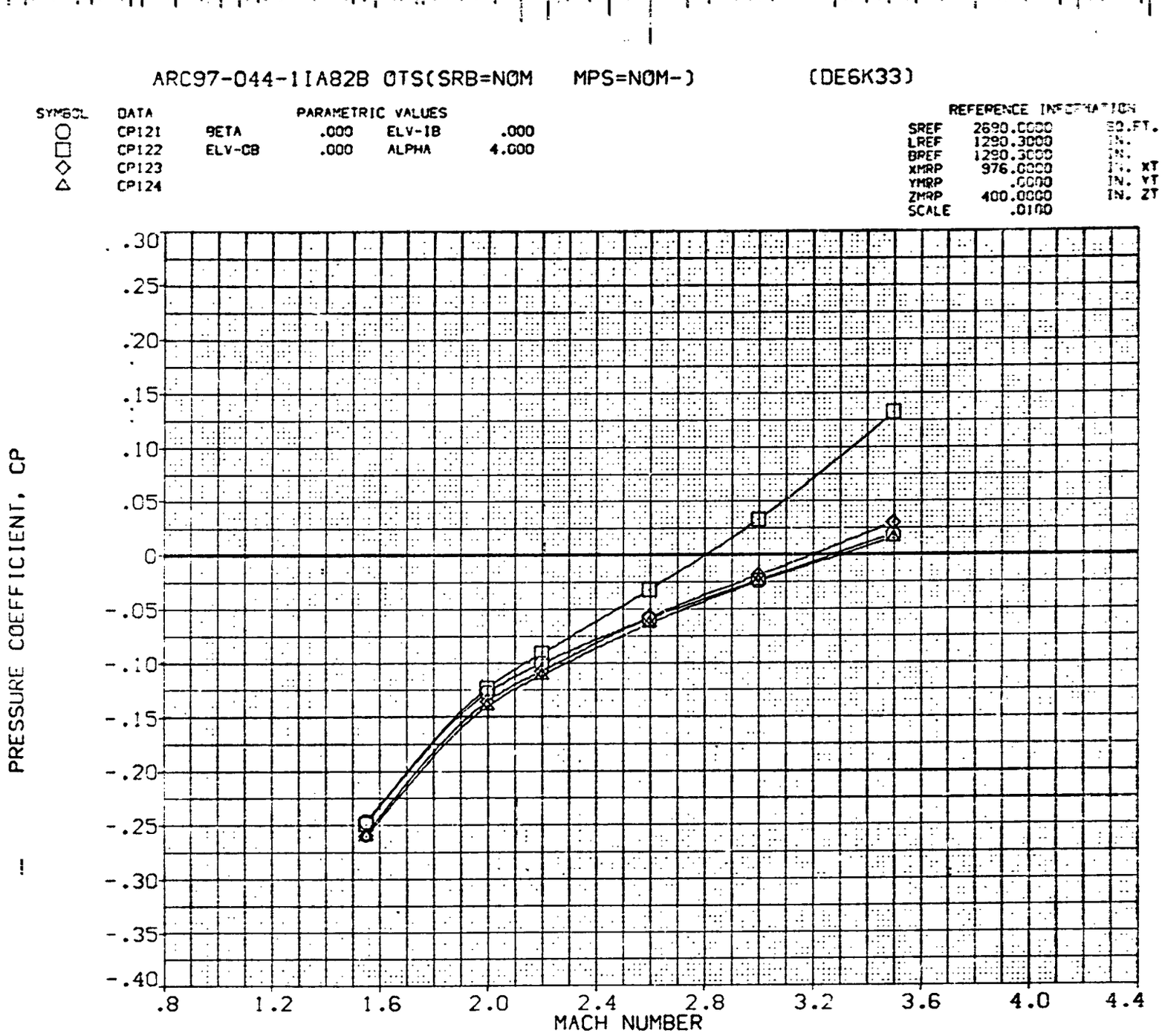


FIG. 74 0MS BASE PRESSURE COEFFICIENTS, SRB=N0M, MPS=N0M-

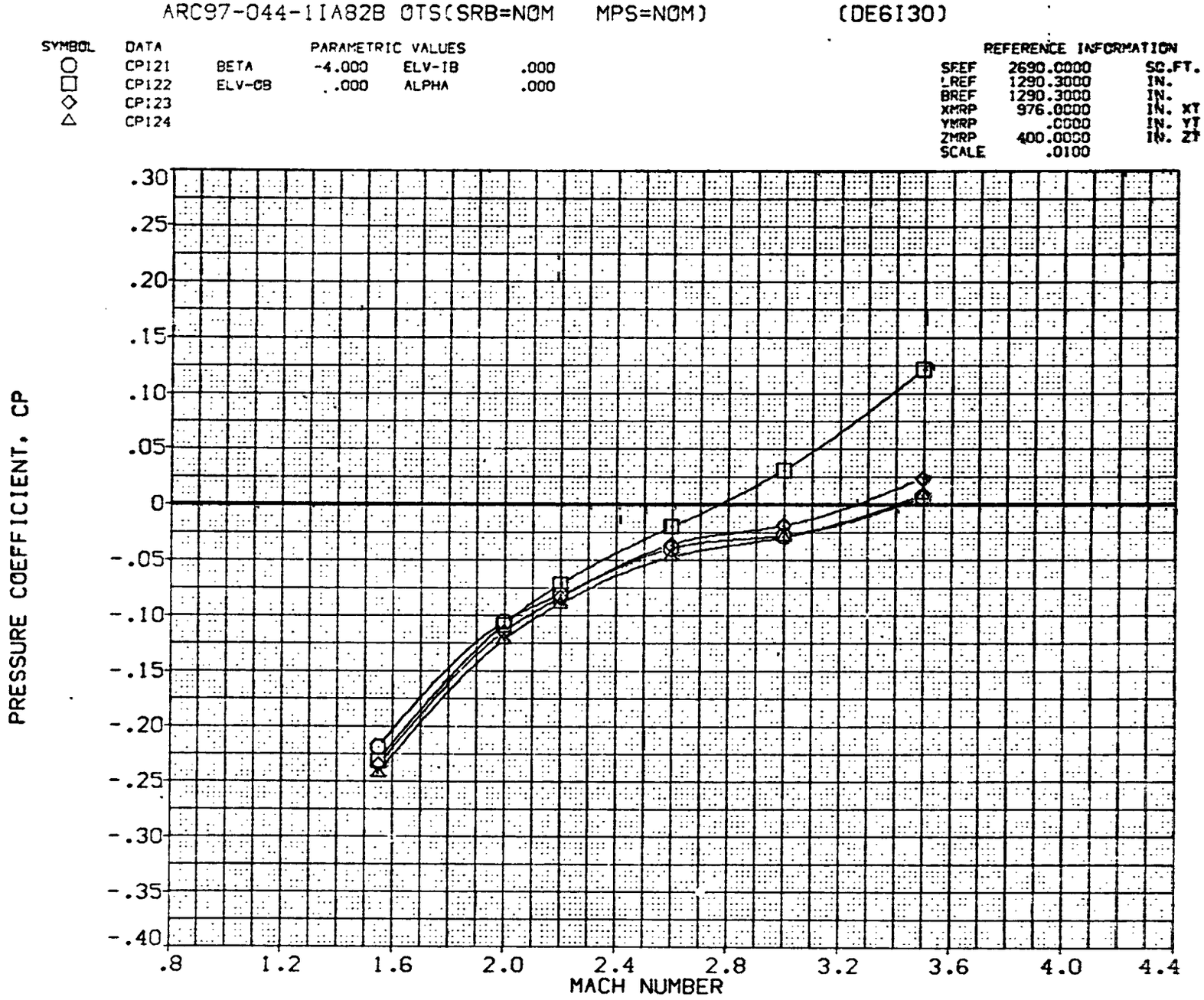


FIG. 75 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

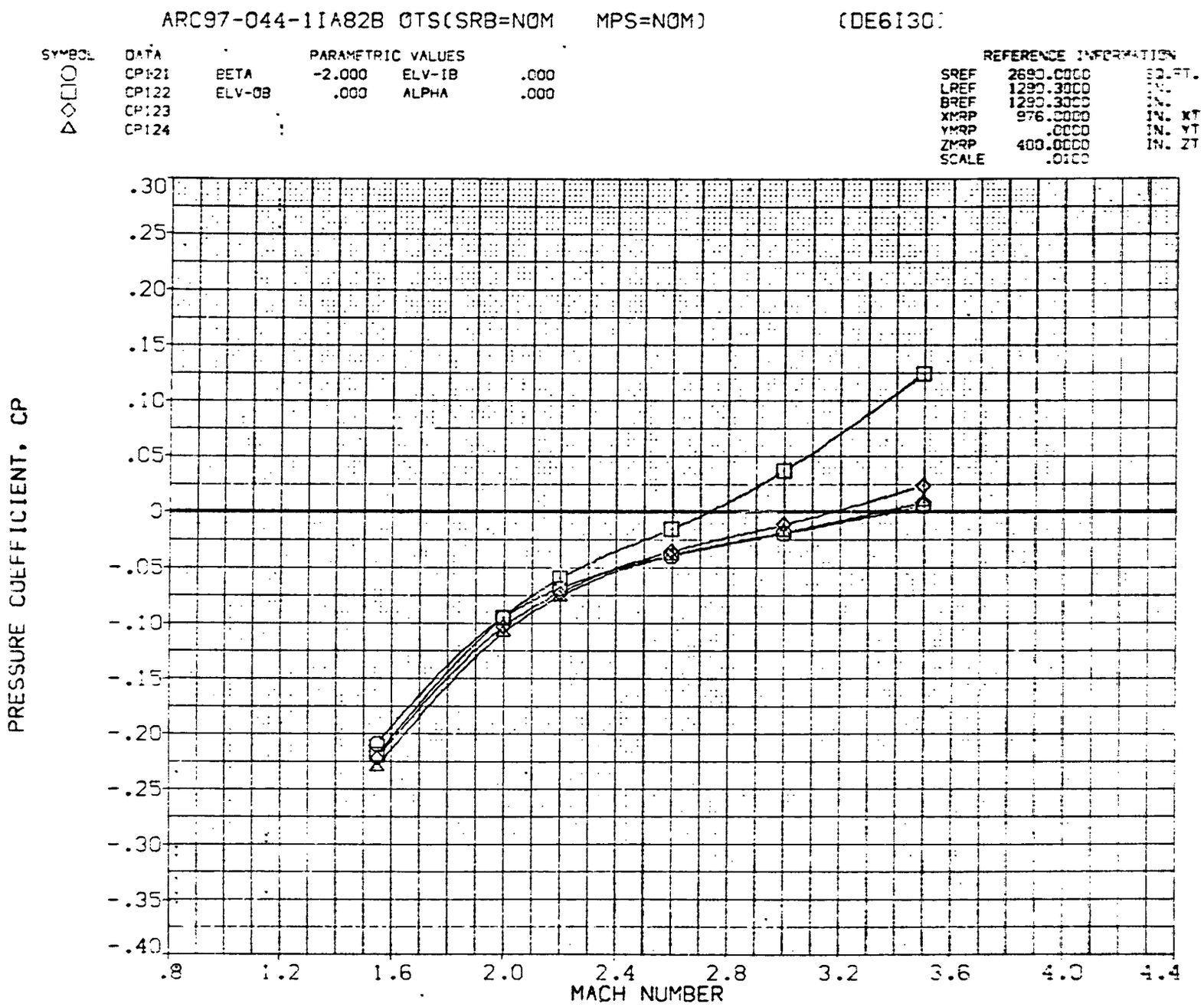


FIG. 75 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

ARC97-044-1IA82B 0TS(SRB=N0M MPS=N0M) (0E6130)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP121	BETA	.000	ELV-IB	.000
□	CP122	ELV-0B	.000	ALPHA	.000
◇	CP123				
△	CP124				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

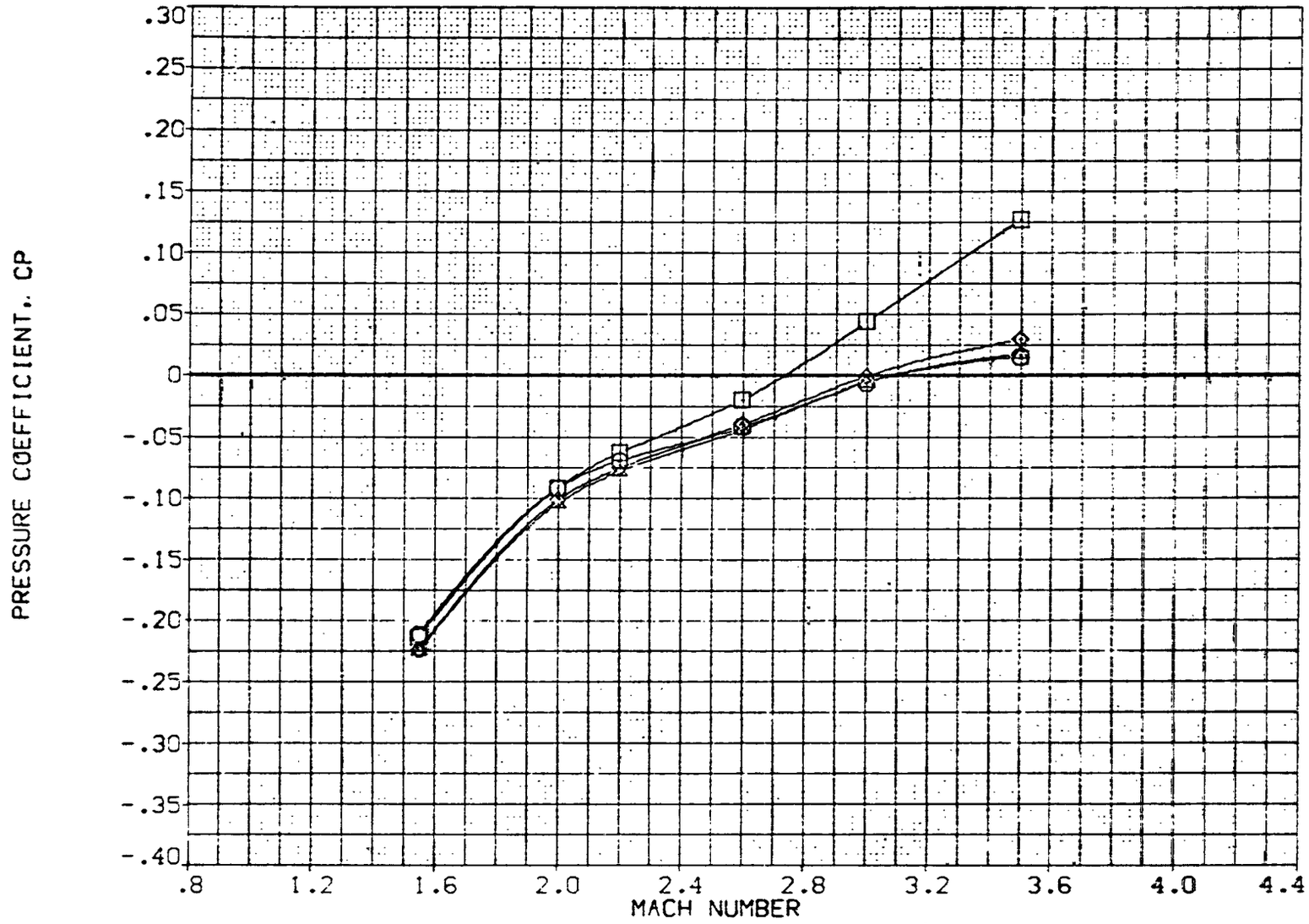


FIG. 75 0MS BASE PRESSURE COEFFICIENTS, SRB=N0M, MPS=N0M

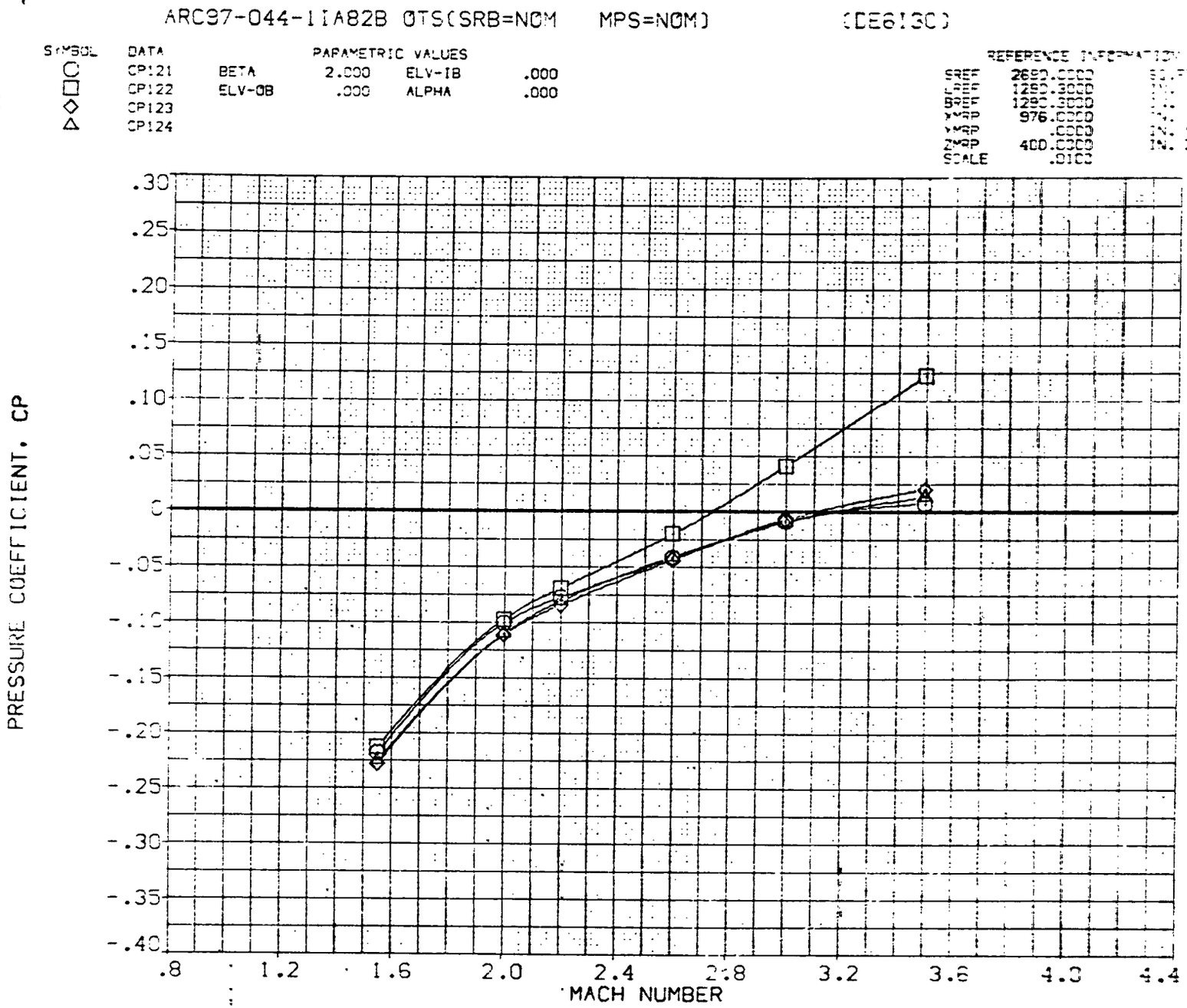


FIG. 75 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

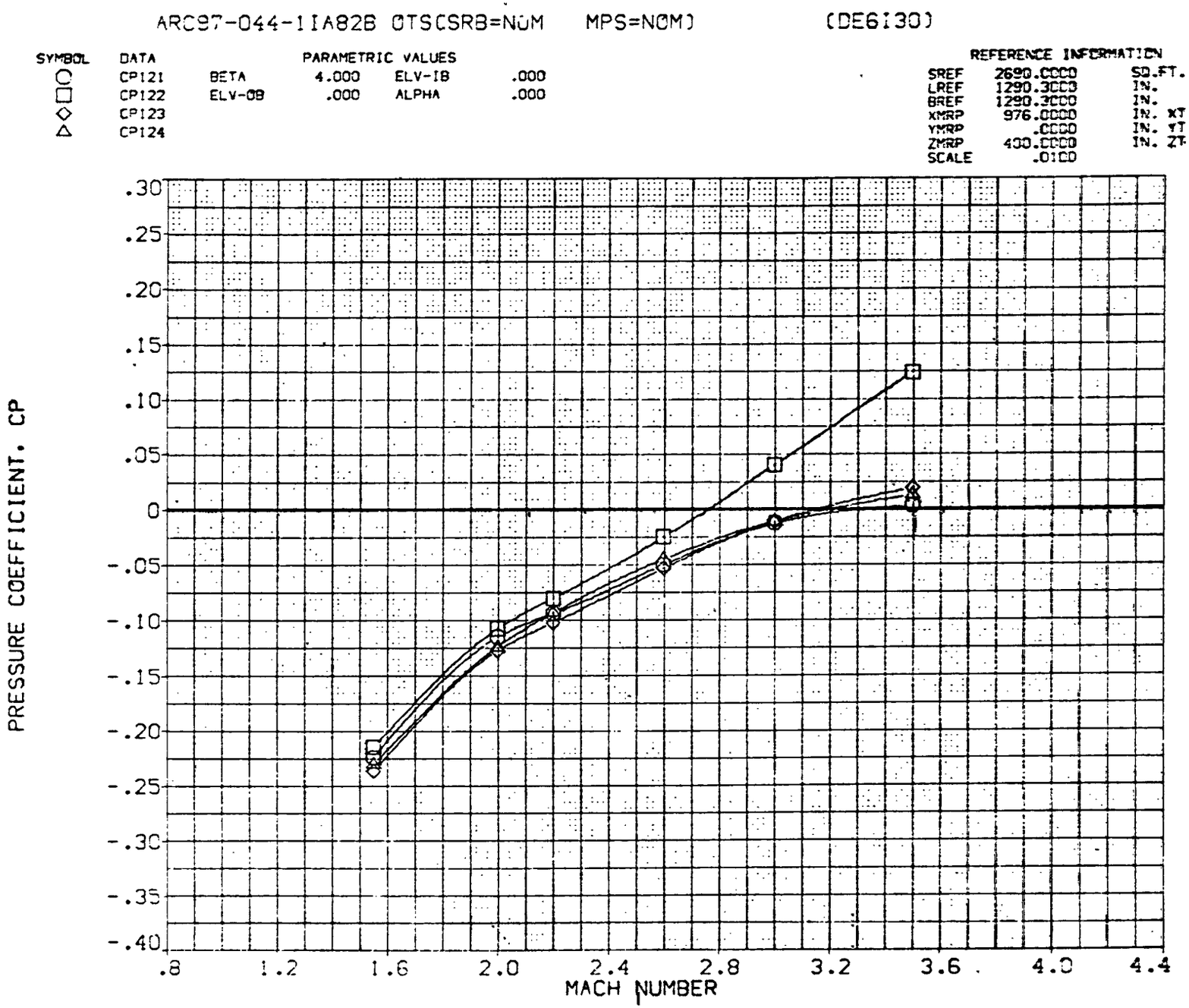


FIG. 75 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

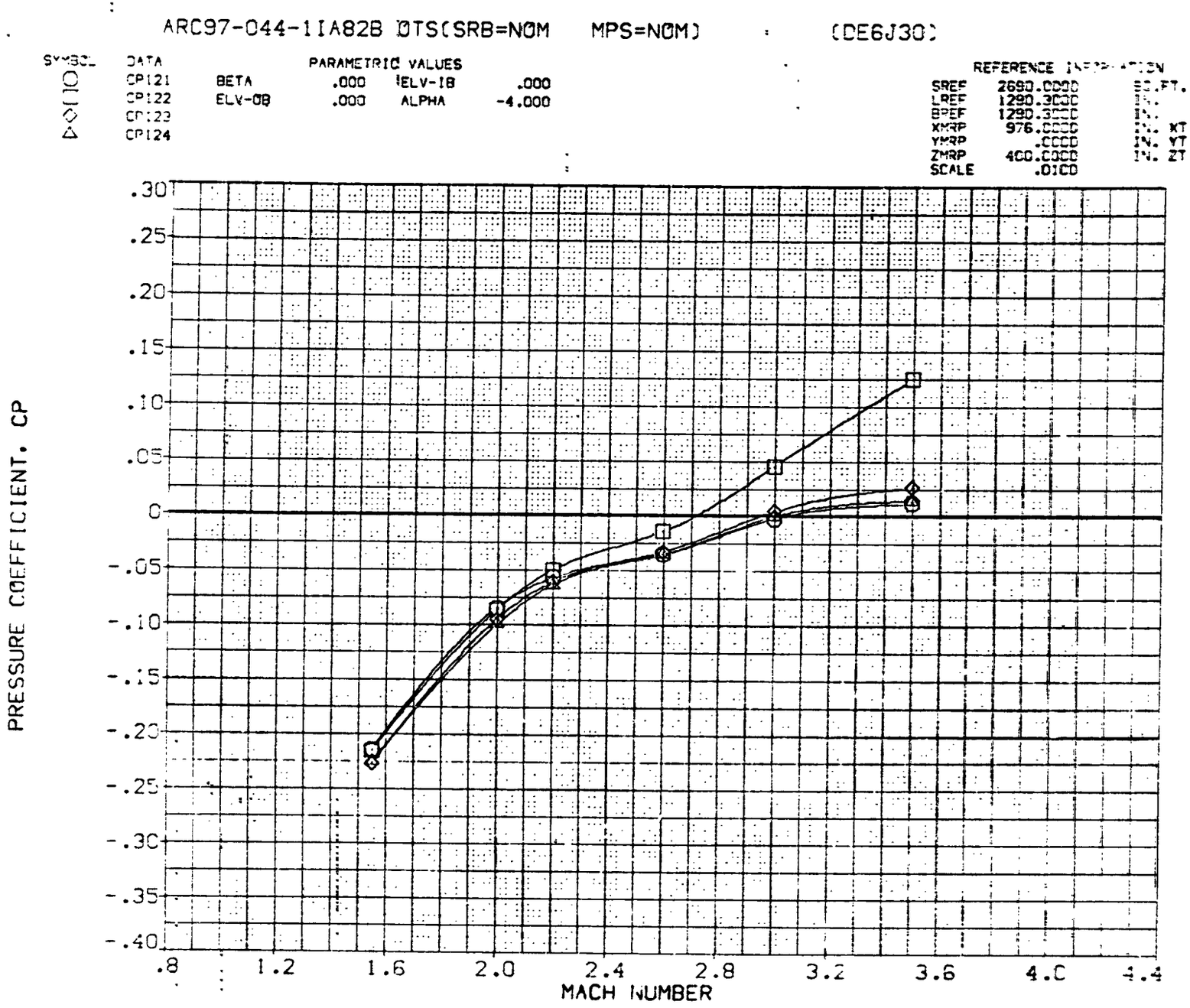


FIG. 75 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

ARC97-C44-1 TA82B OTS(SRB=NOM MPS=NOM) (DE6K30)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP121	BETA	.000	ELV-IB	.000
□	CP122	ELV-OB	.000	ALPHA	4.000
◇	CP123				
△	CP124				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

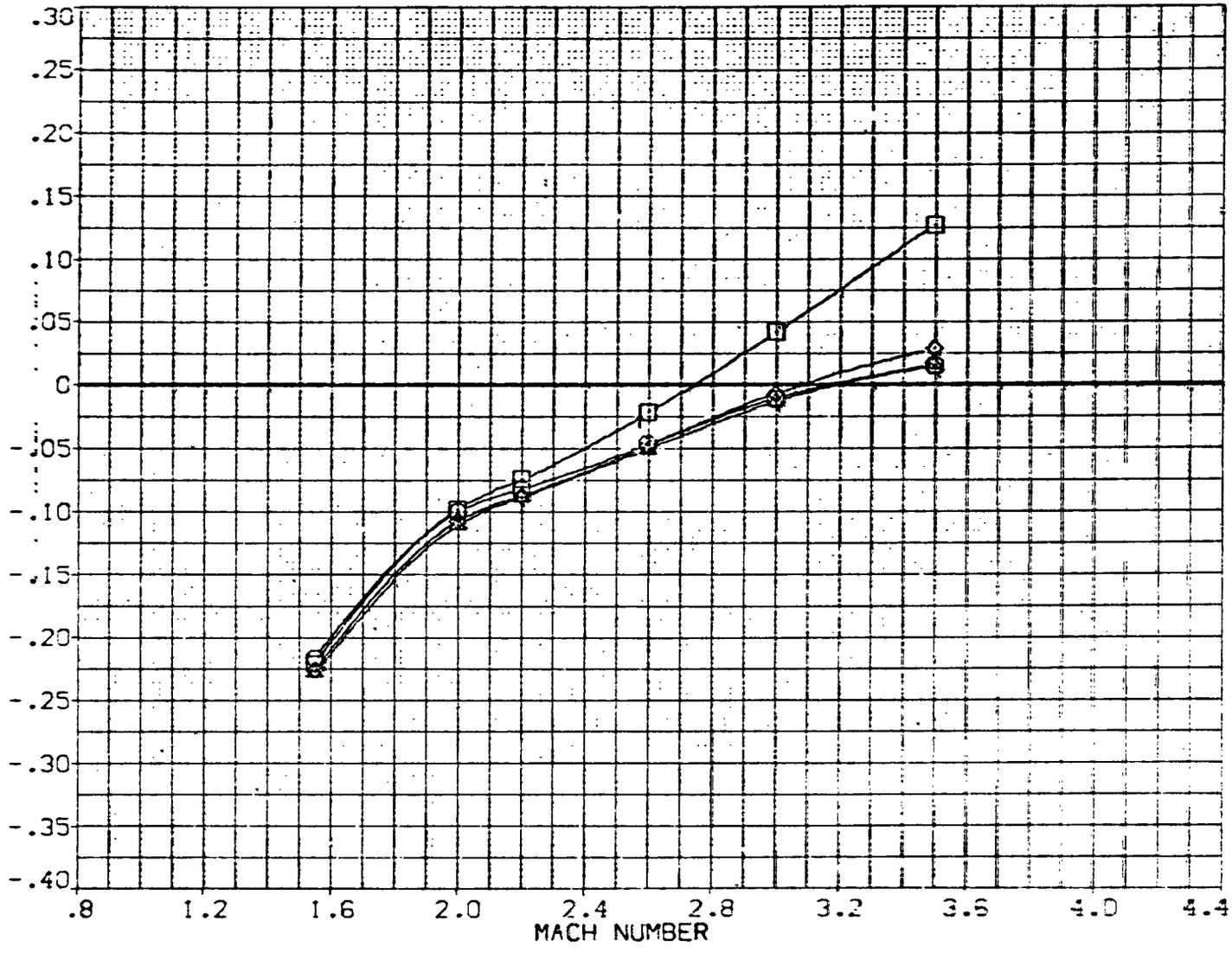


FIG. 75 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

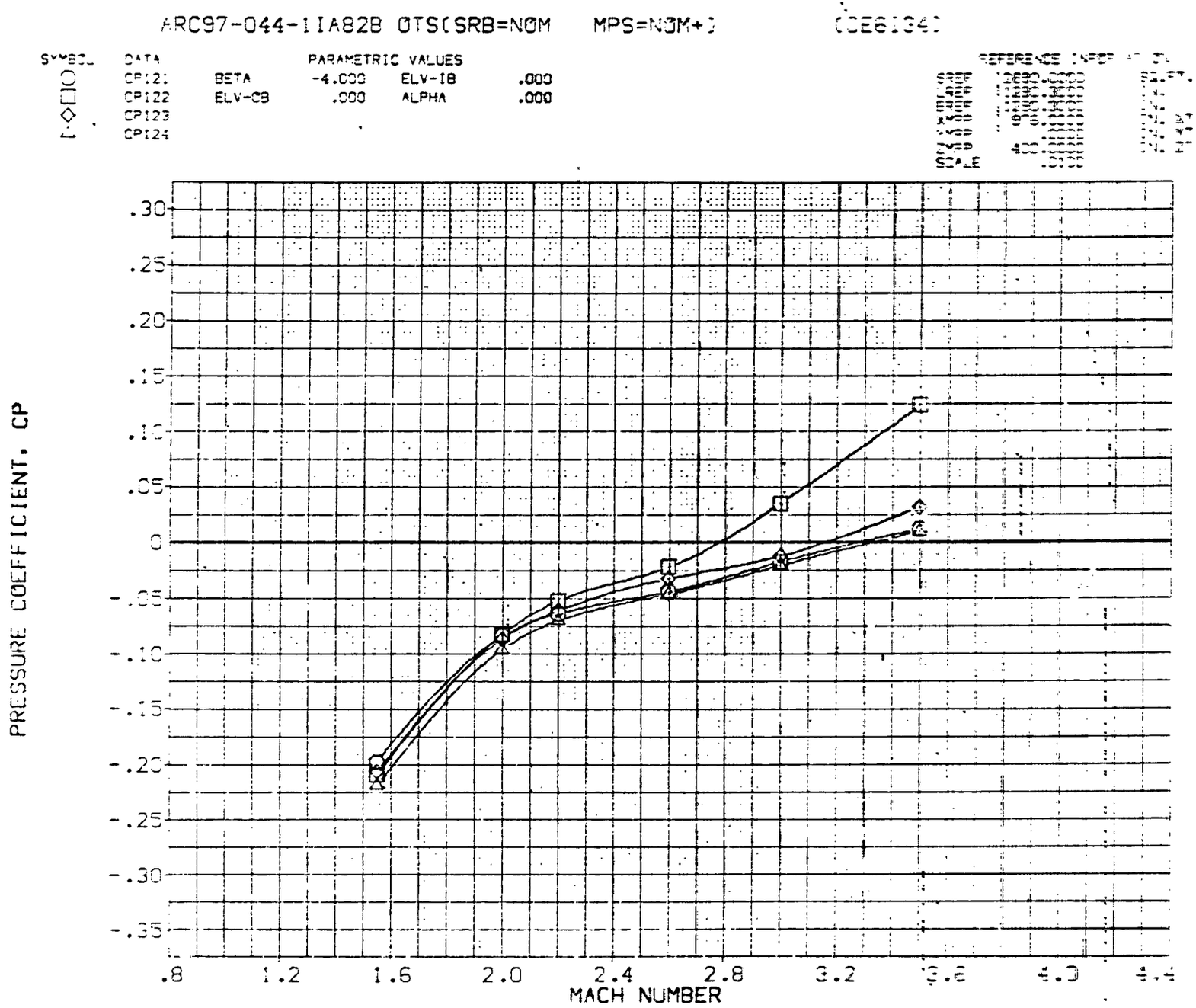


FIG. 76 0MS BASE PRESSURE COEFFICIENTS, SRB=N0M, MPS=N0M+

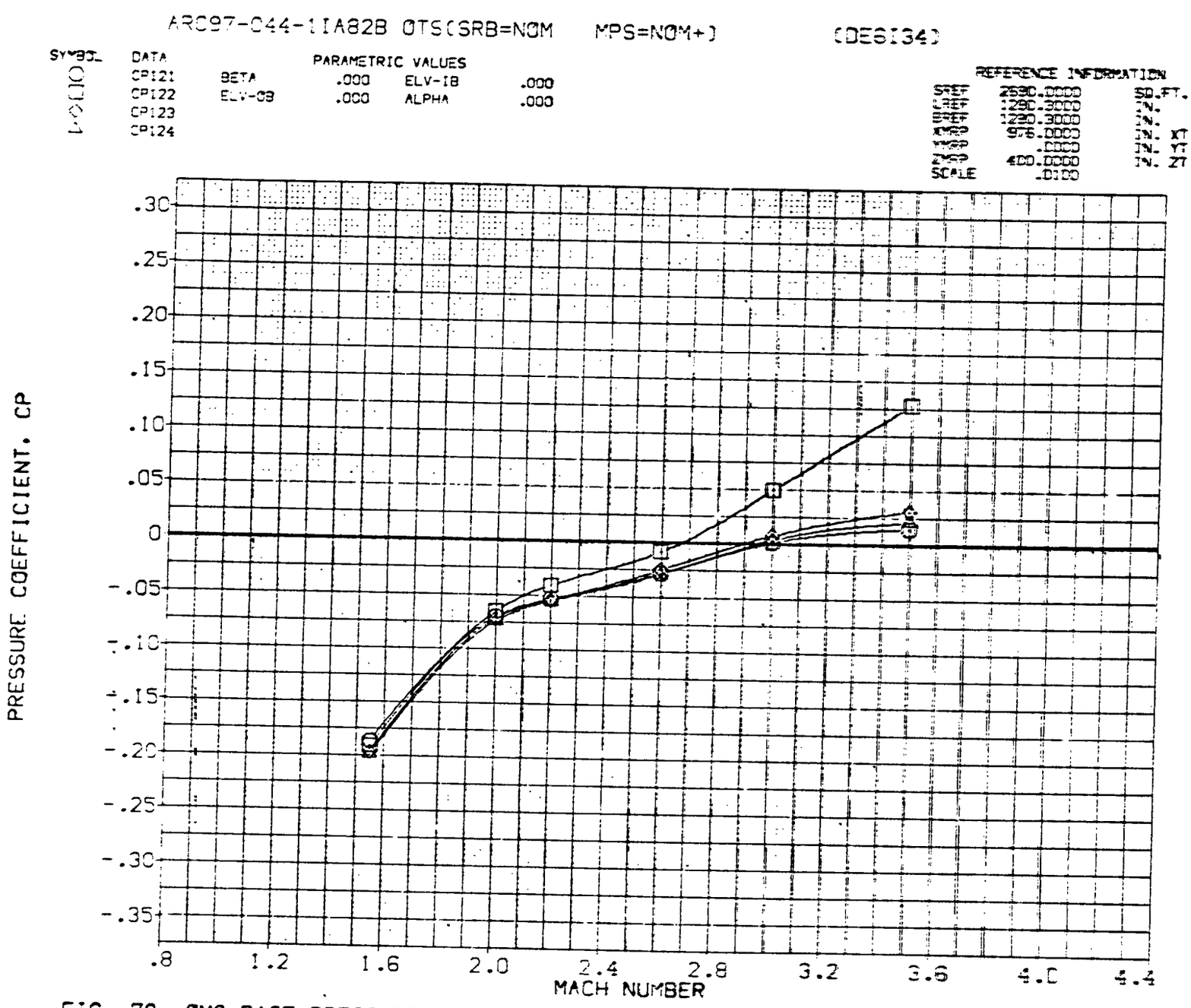


FIG. 76 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM+

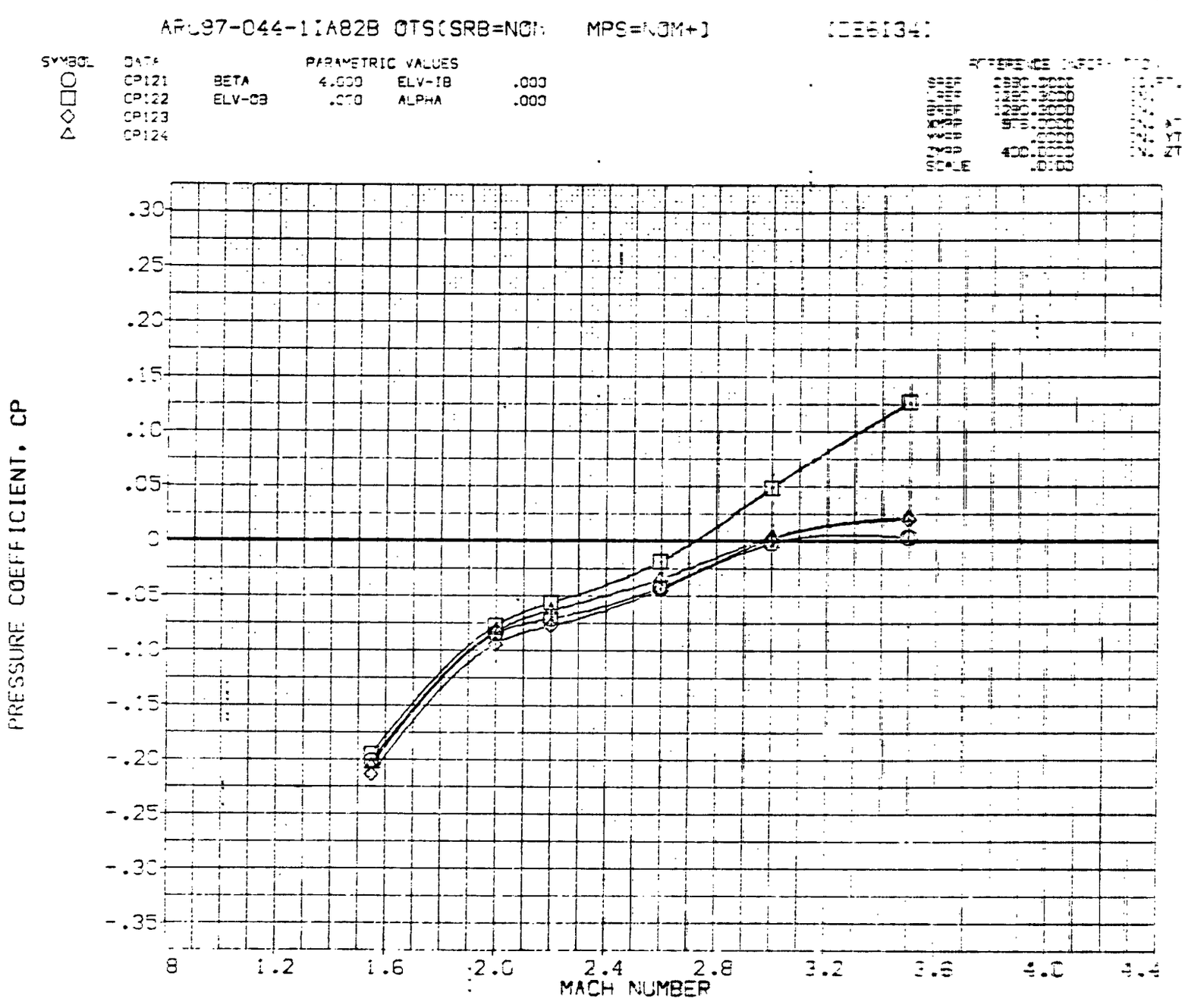


FIG. 76 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

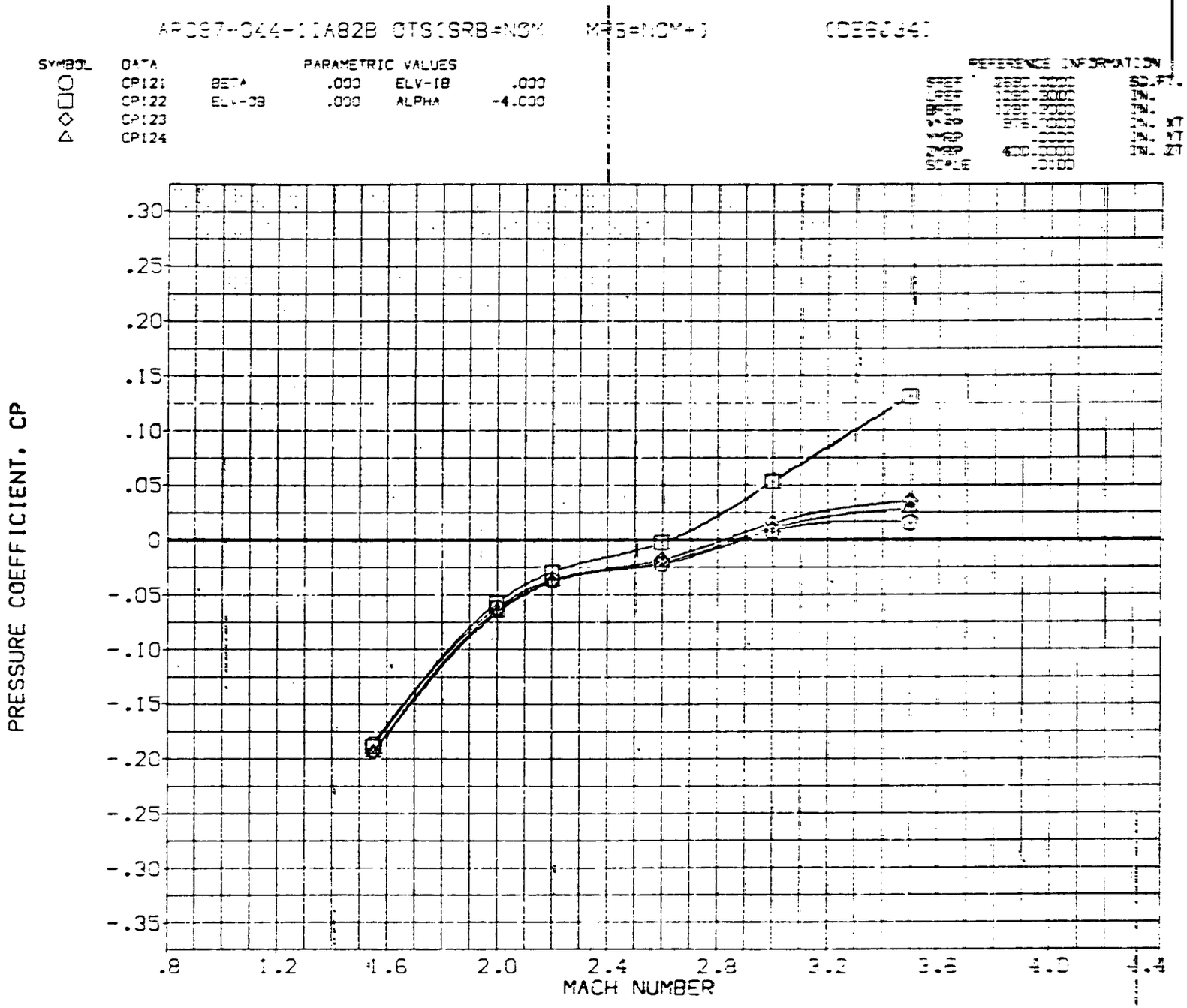


FIG. 76 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM

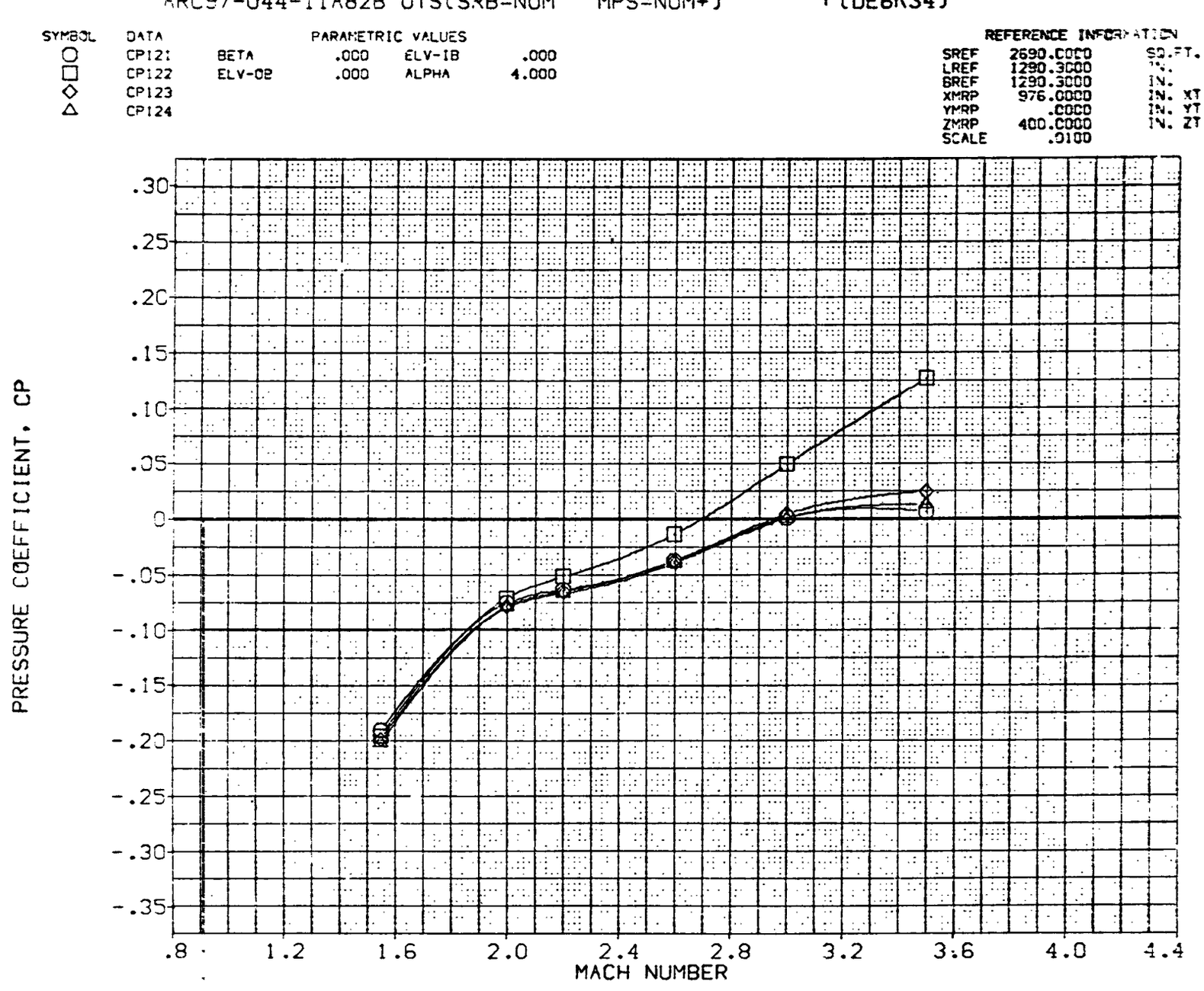


FIG. 76 OMS BASE PRESSURE COEFFICIENTS, SRB=NOM, MPS=NOM+

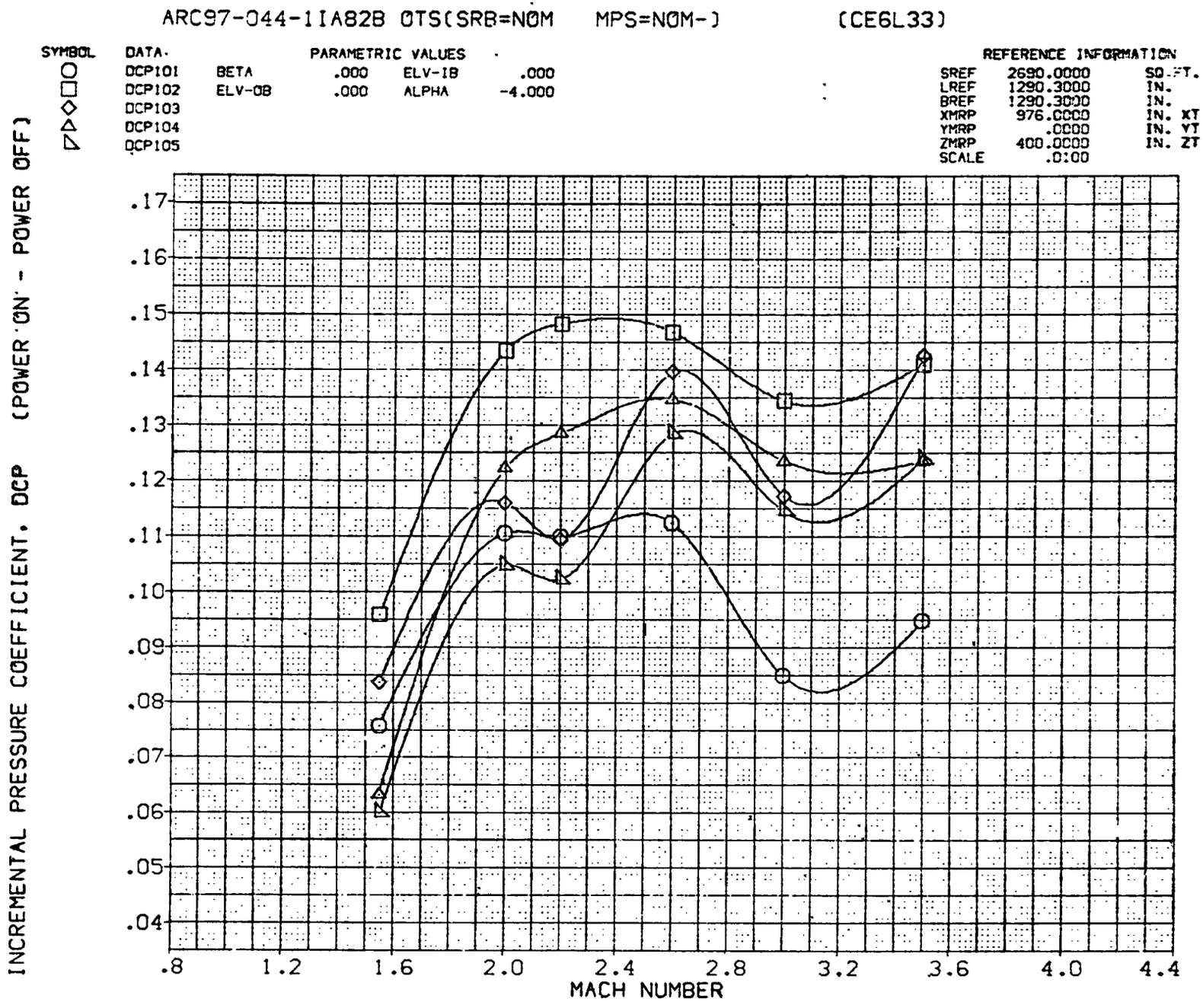


FIG. 77 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), :SRB=NOM, MPS=NOM-

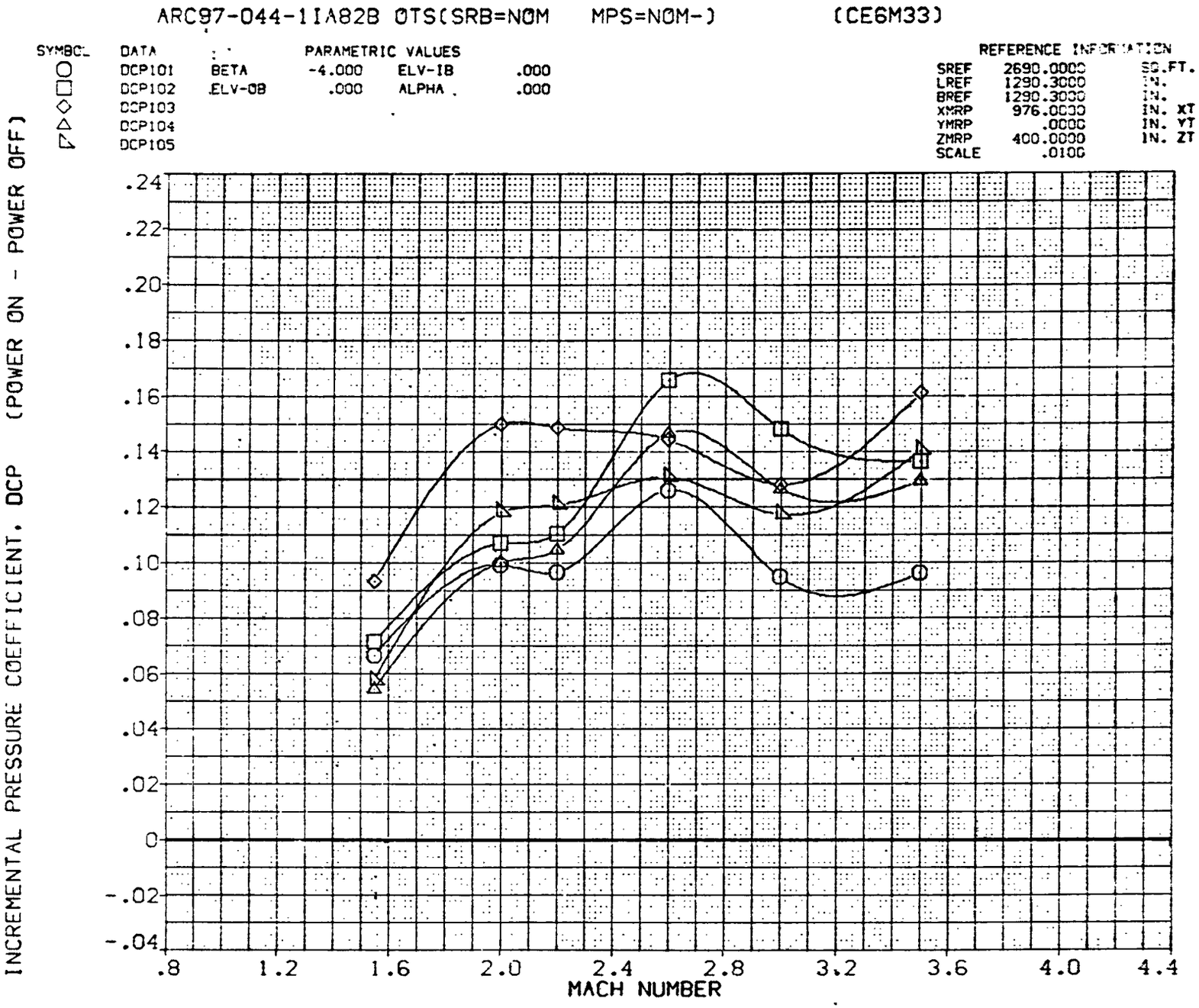


FIG. 77 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM-

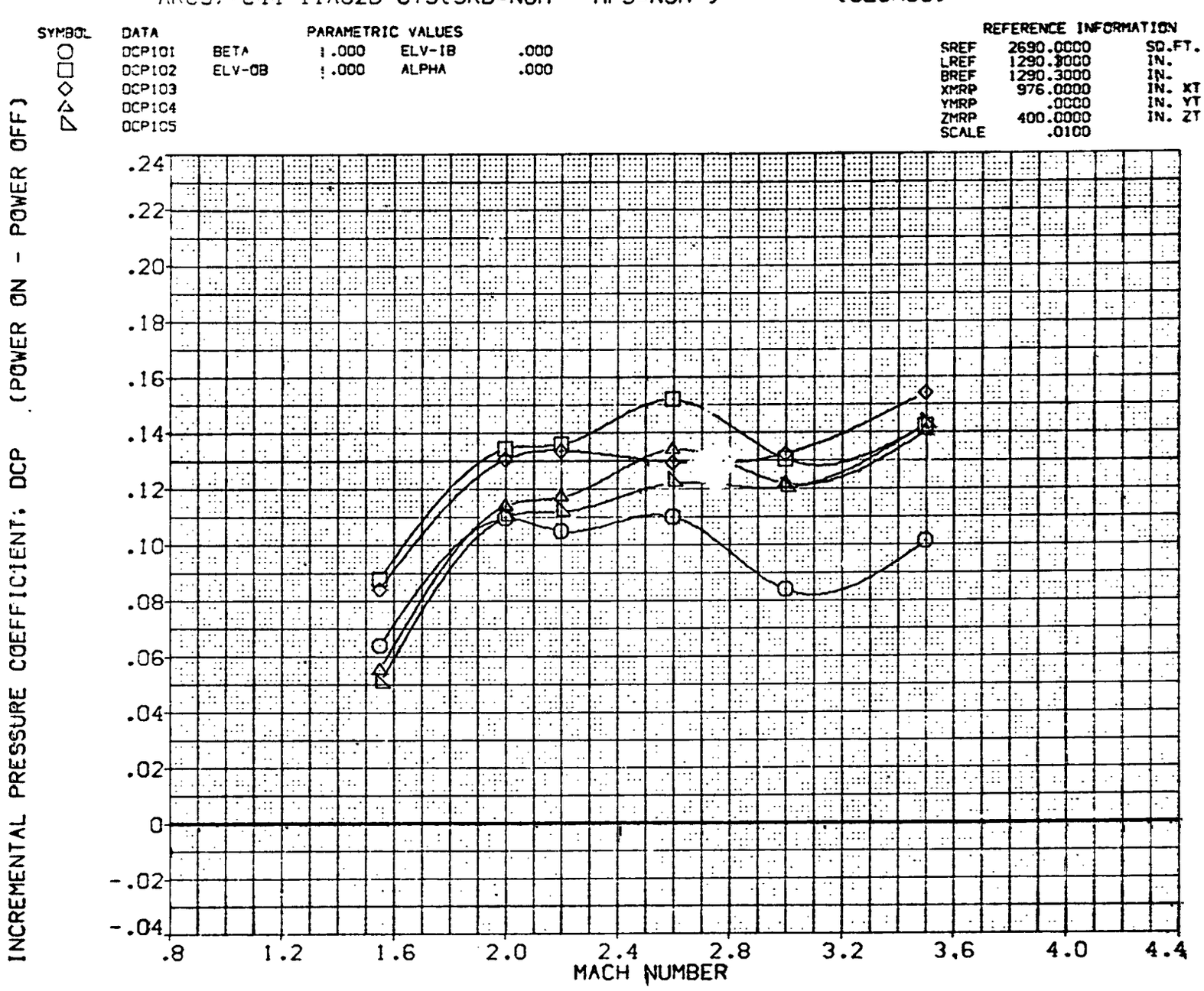


FIG. 77 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM-

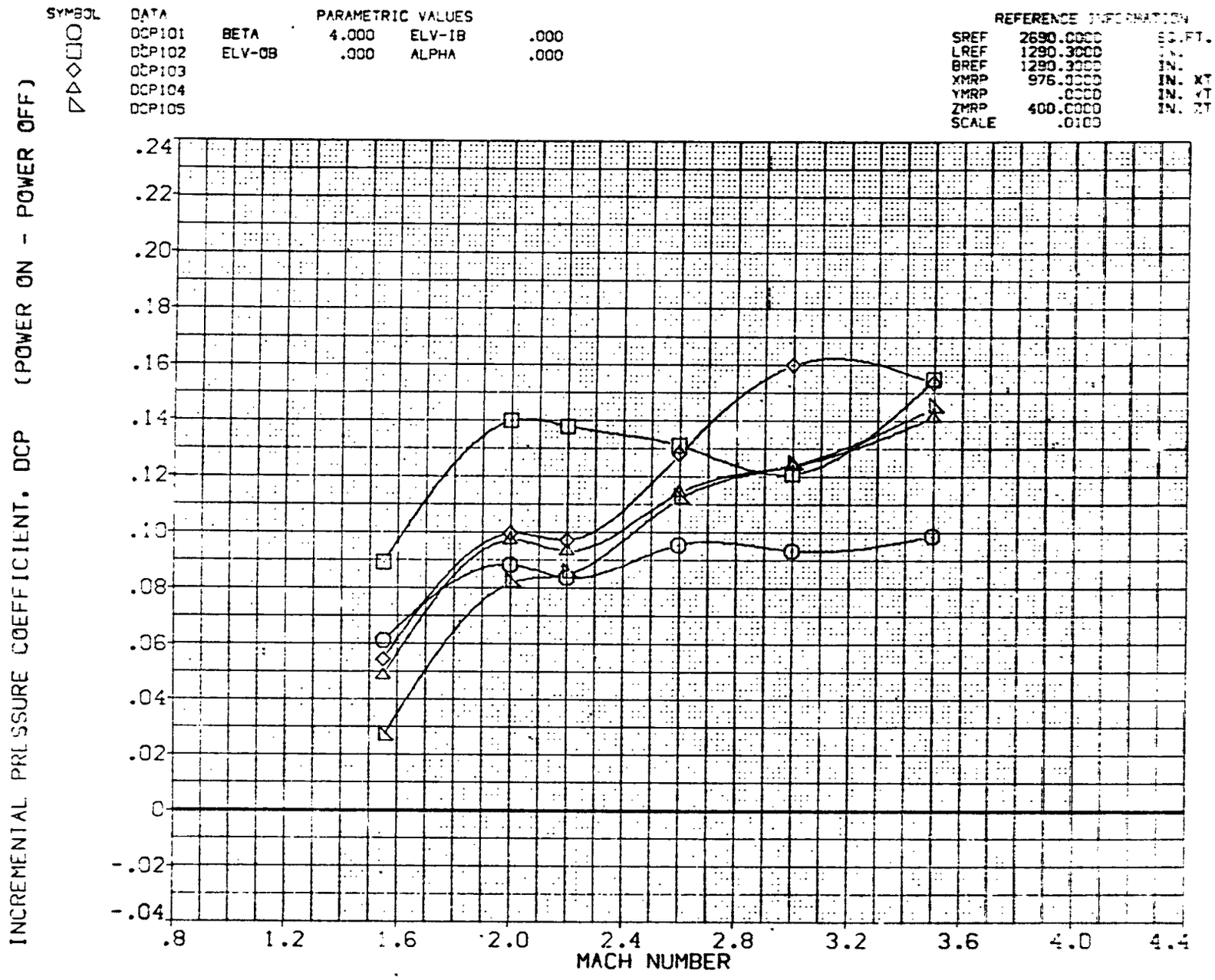


FIG. 77 ØRBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NØM, MPS=NØM-

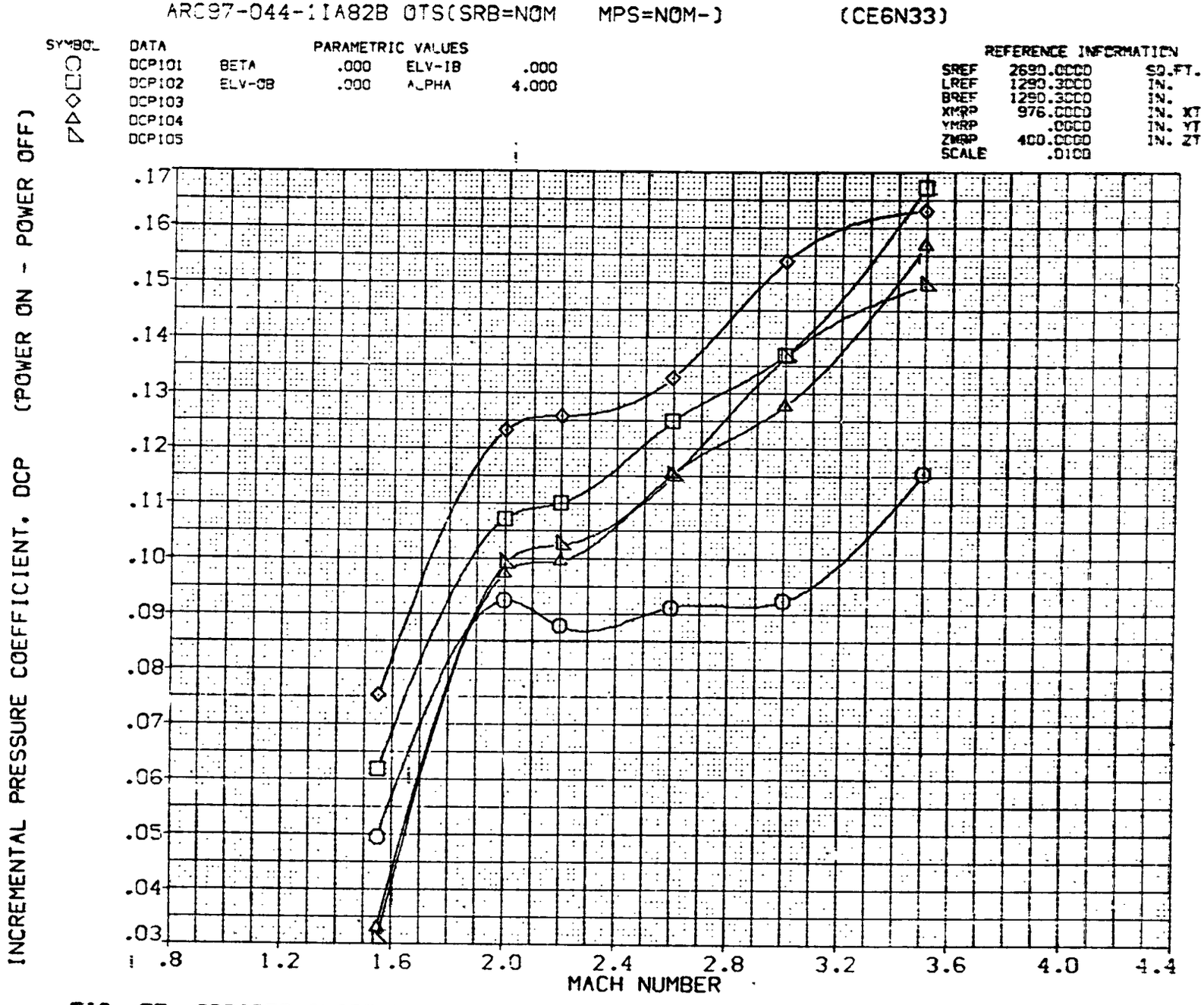


FIG. 77 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM-

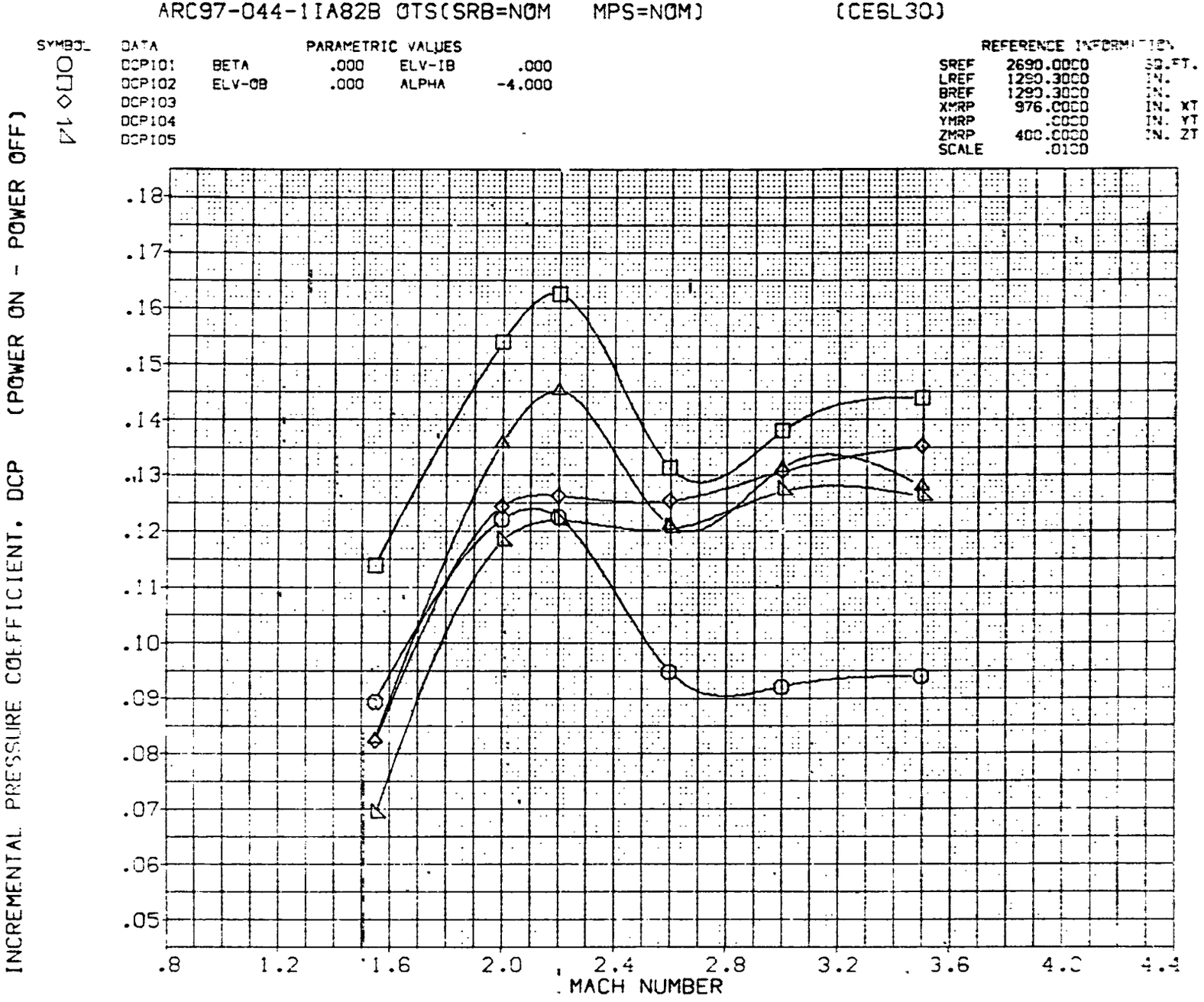


FIG. 78 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM

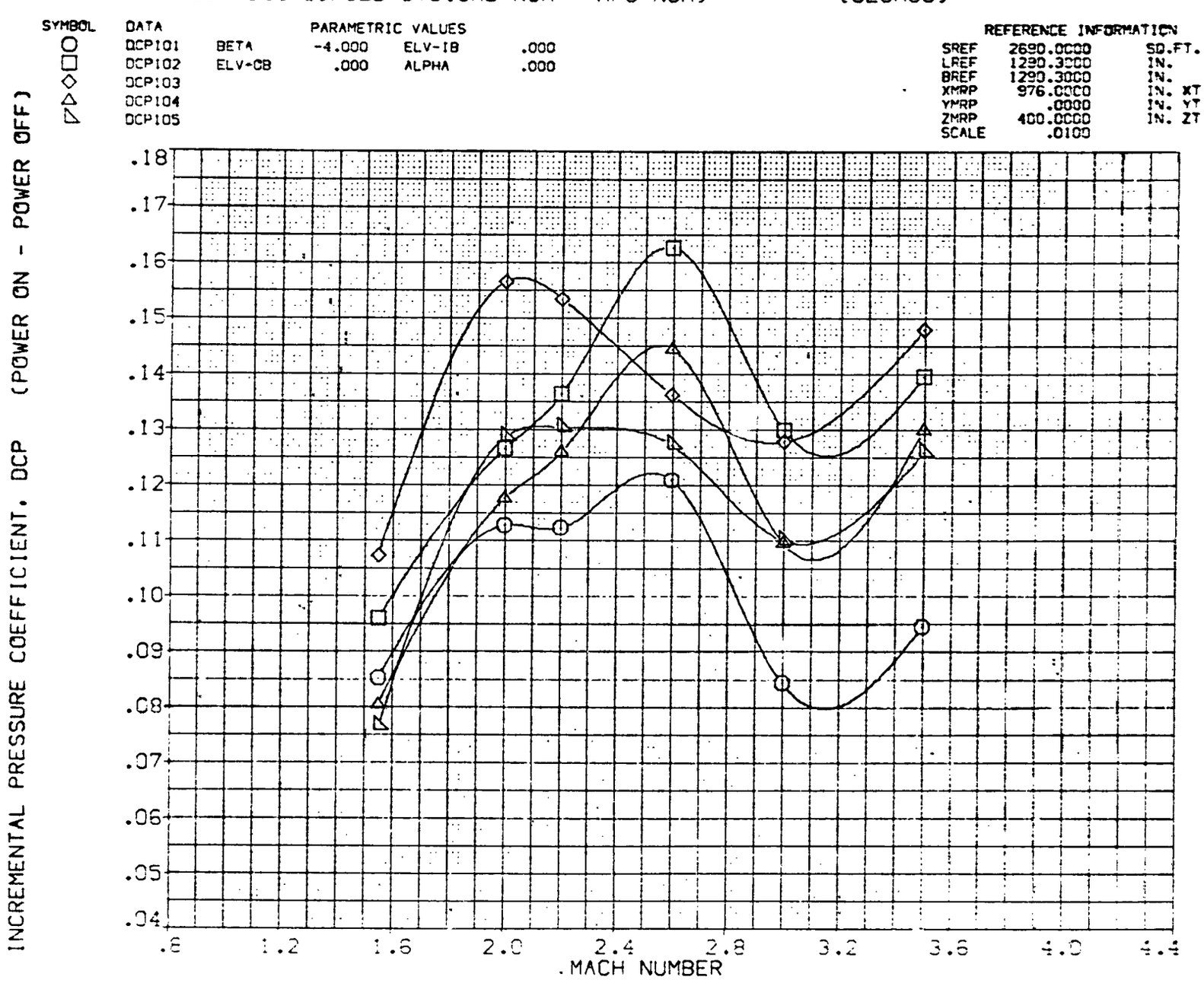


FIG. 78 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM

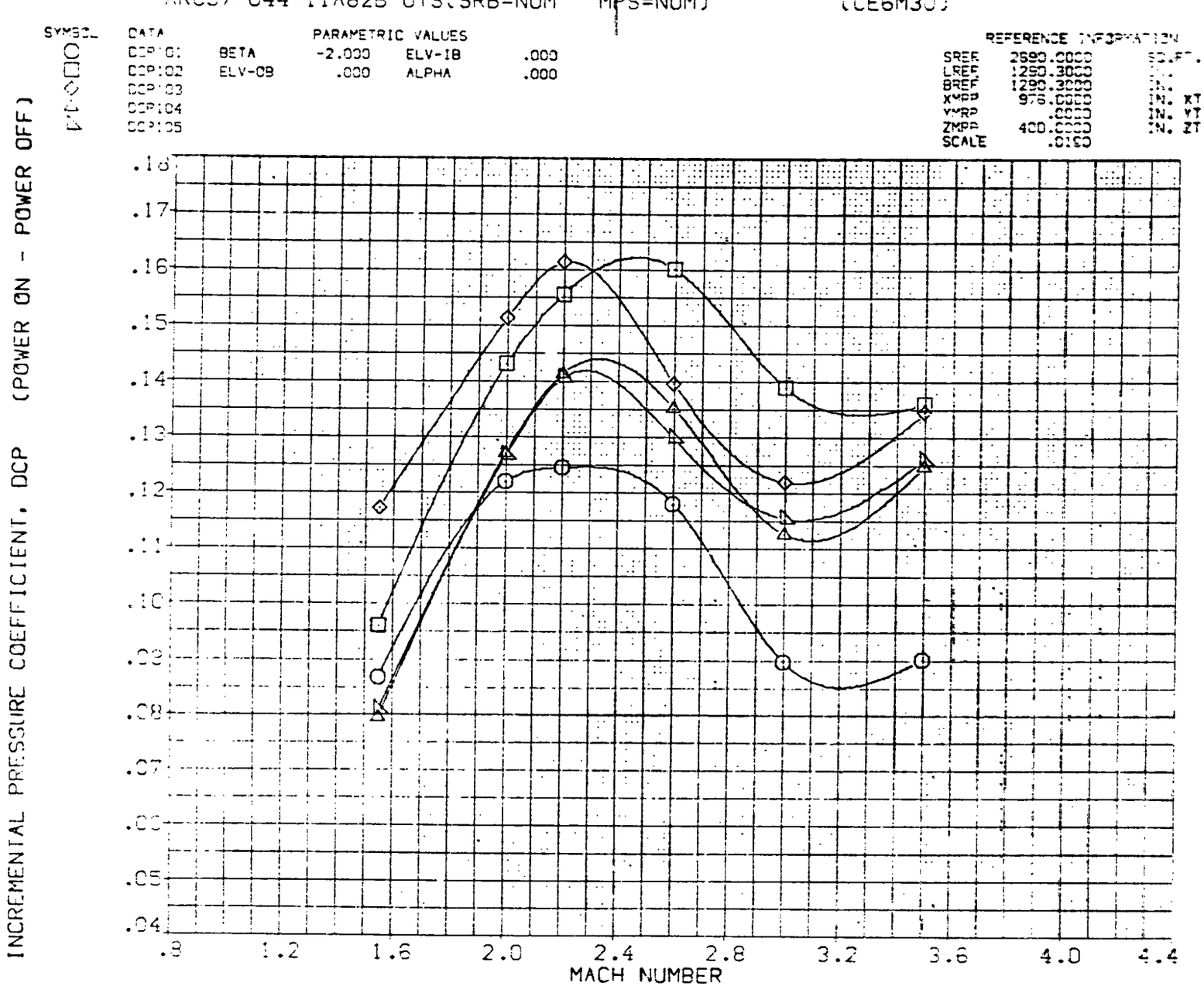


FIG. 78 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM



FIG. 78 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM

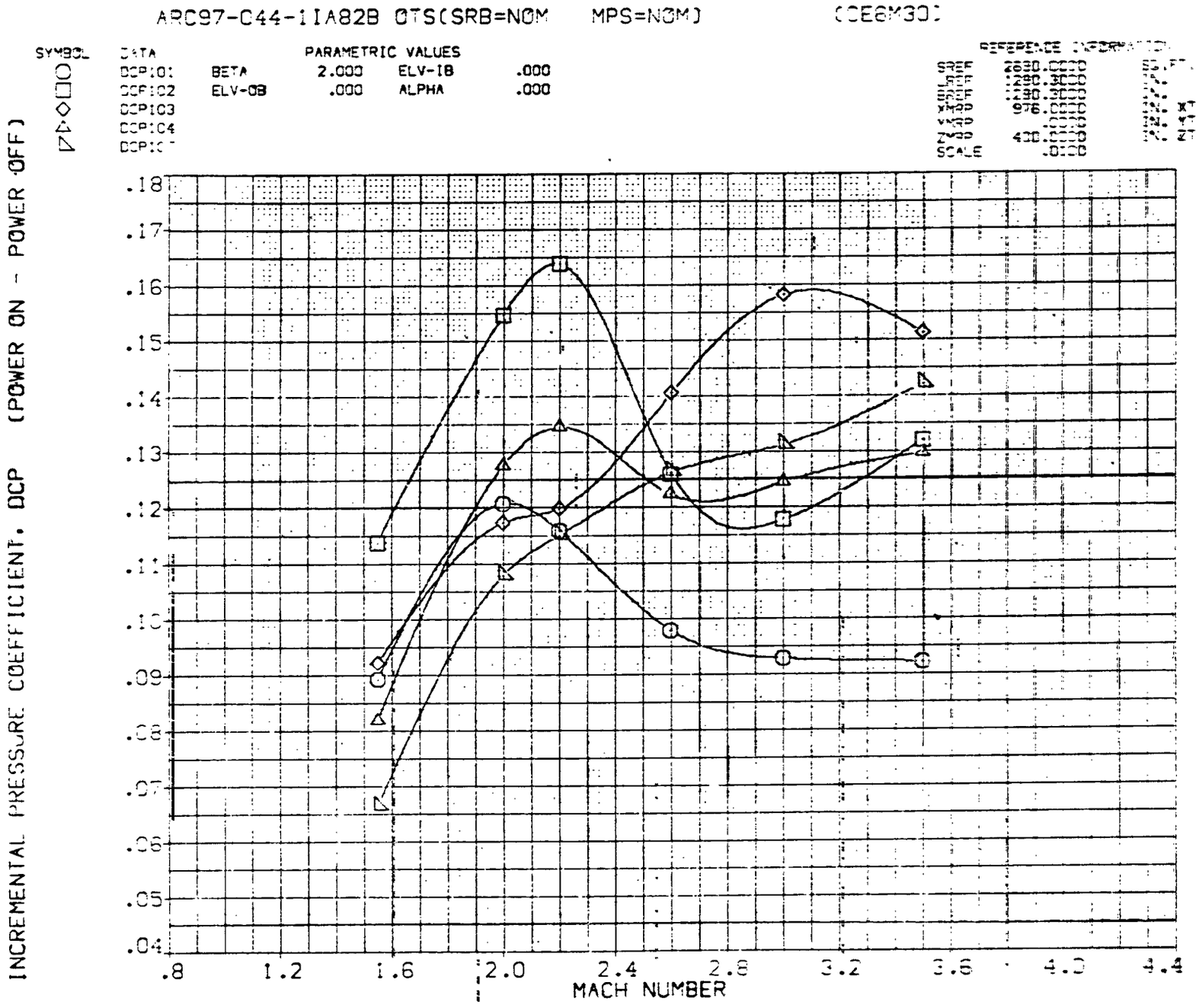


FIG. 78 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM

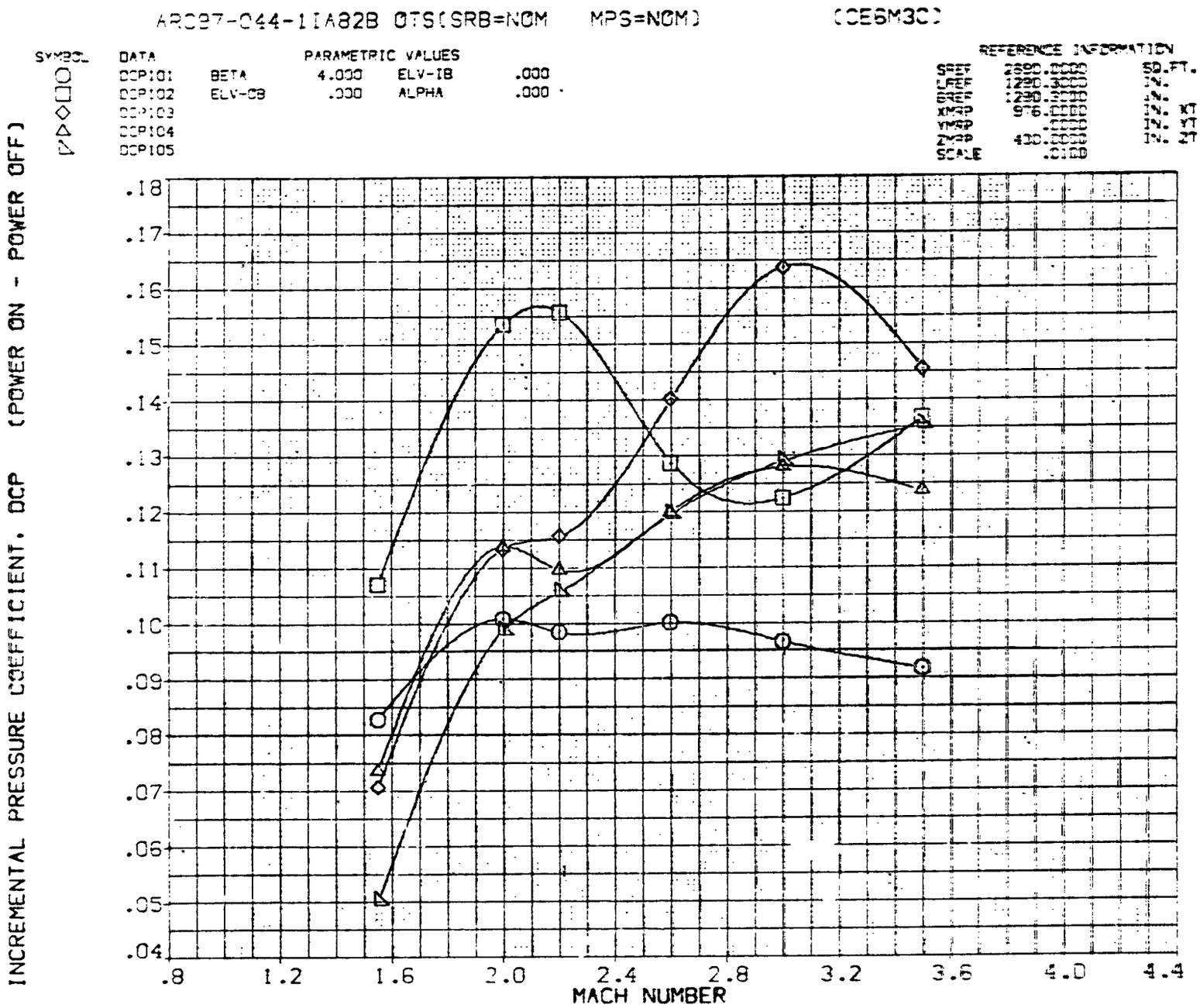


FIG. 78 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM

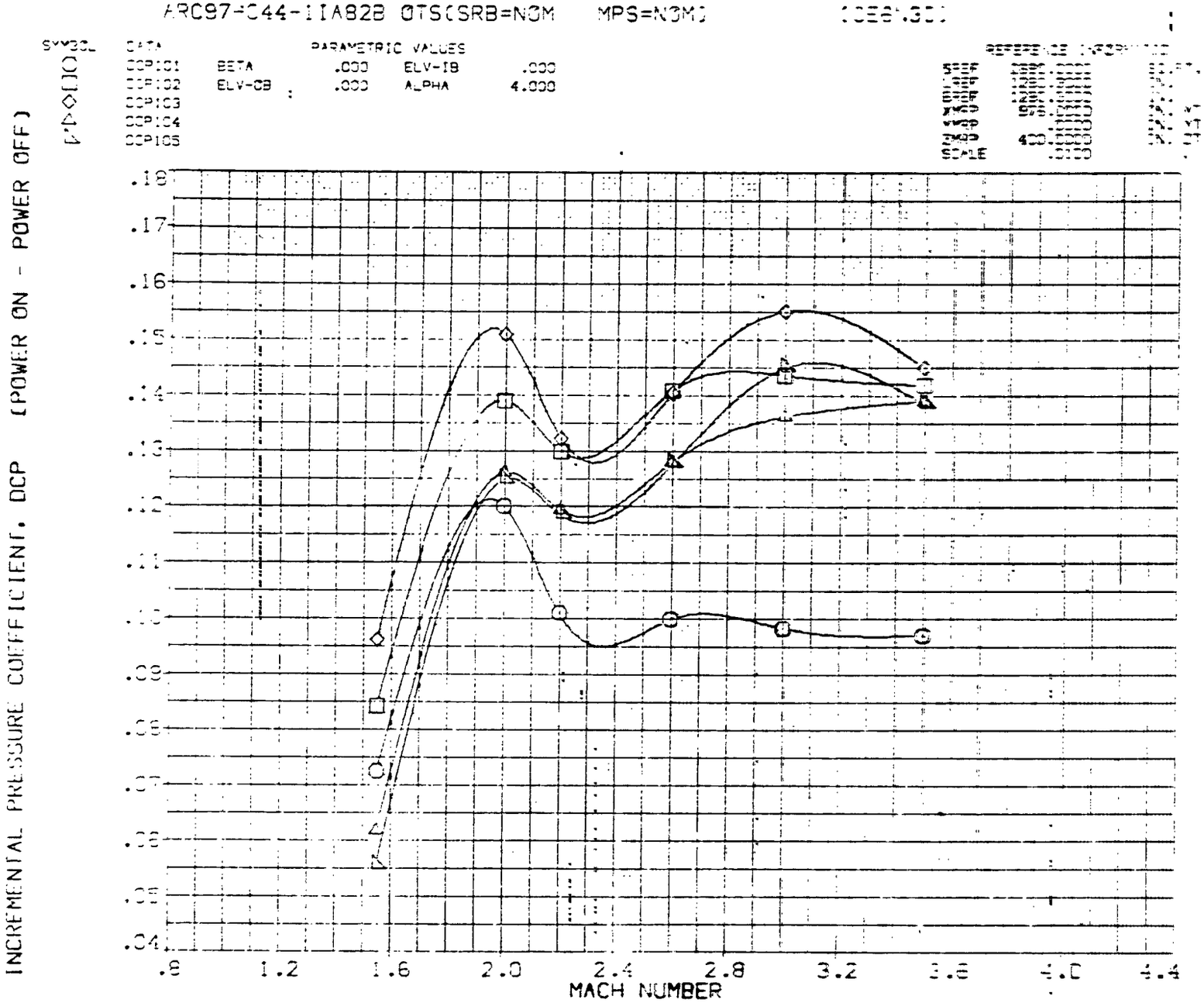


FIG. 78 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM

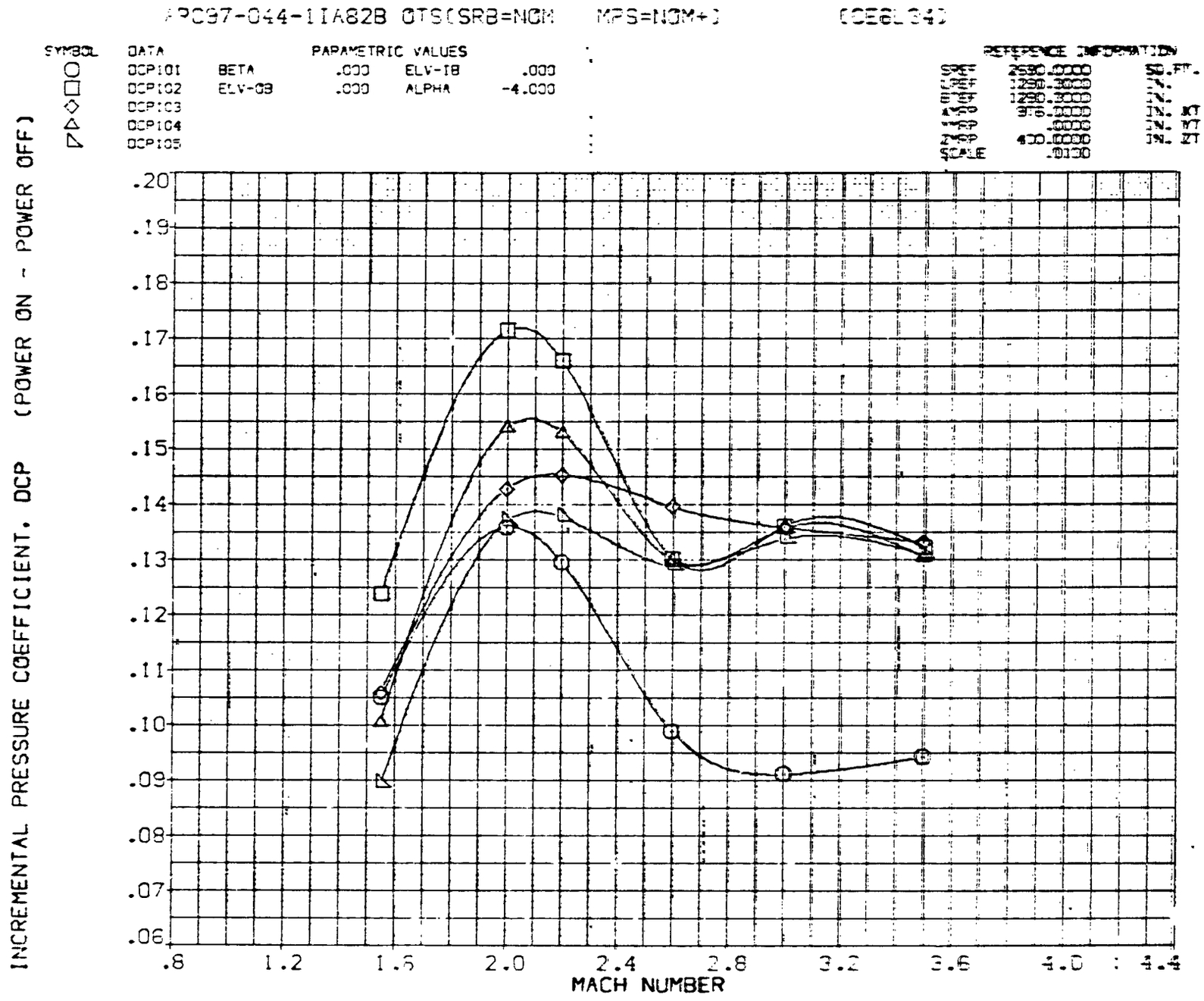


FIG. 79 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER). SRB=NOM. MPS=NOM+

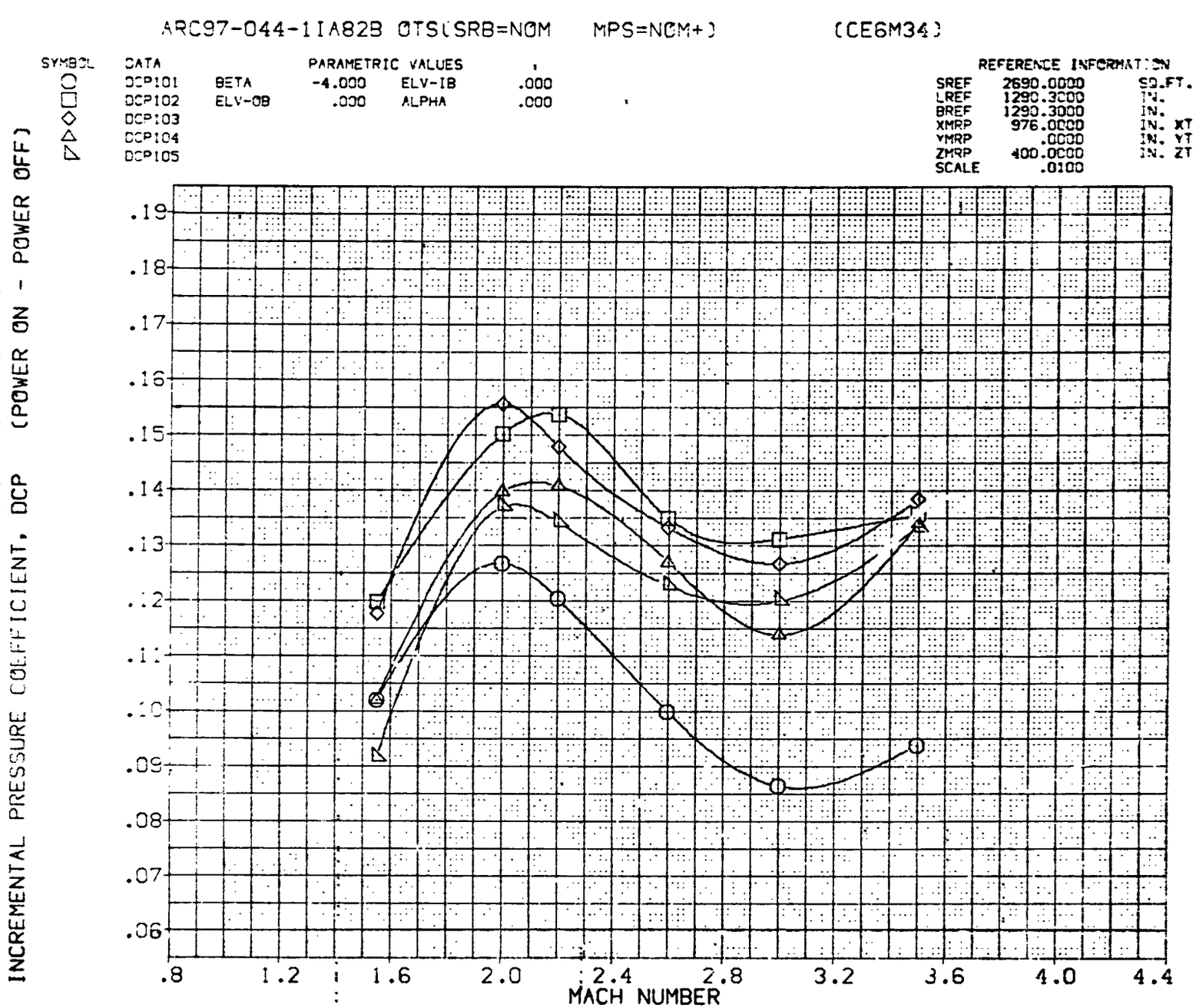


FIG. 79 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM+

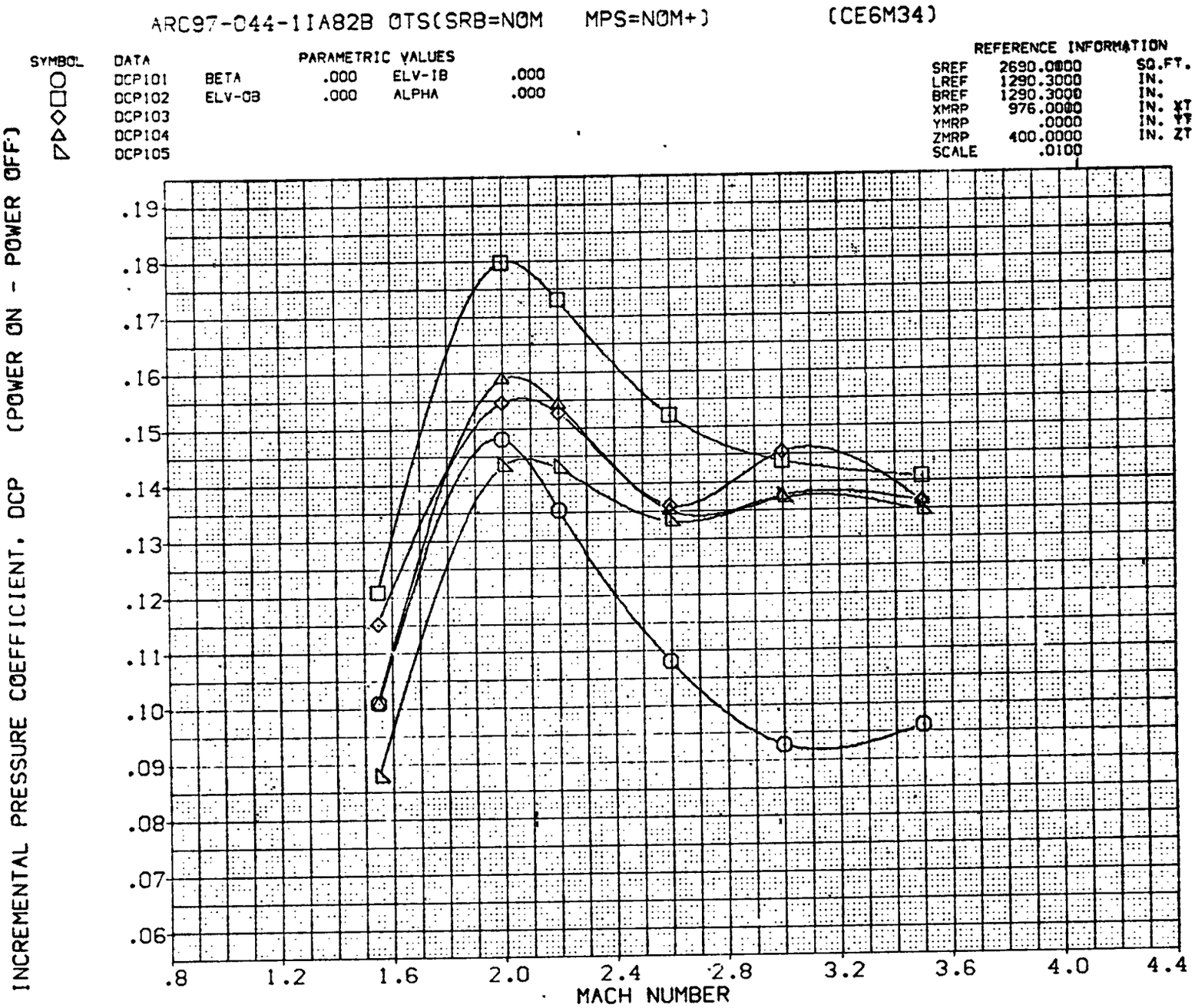


FIG. 79 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM+

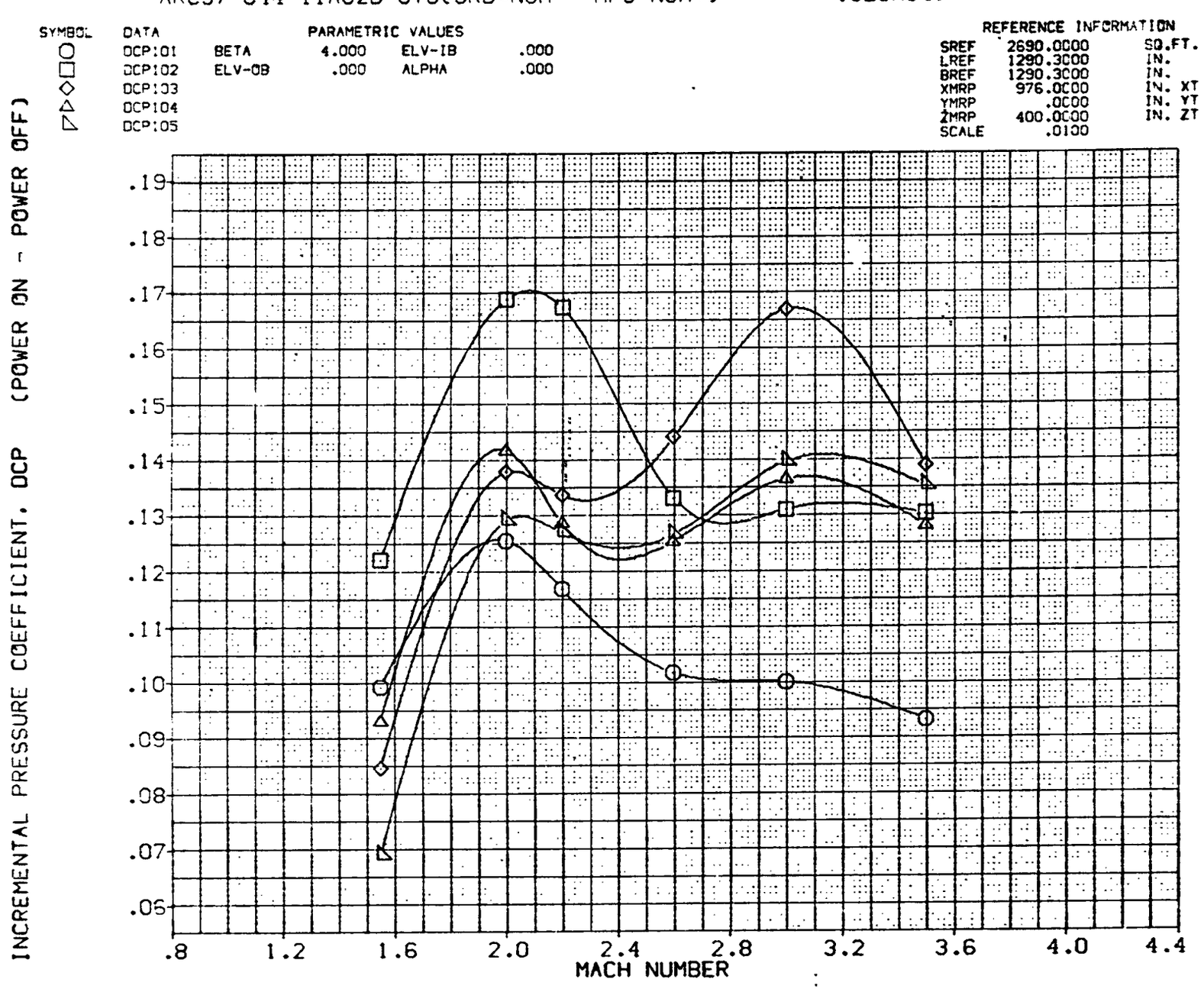


FIG. 79 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=N0M, MPS=N0M+

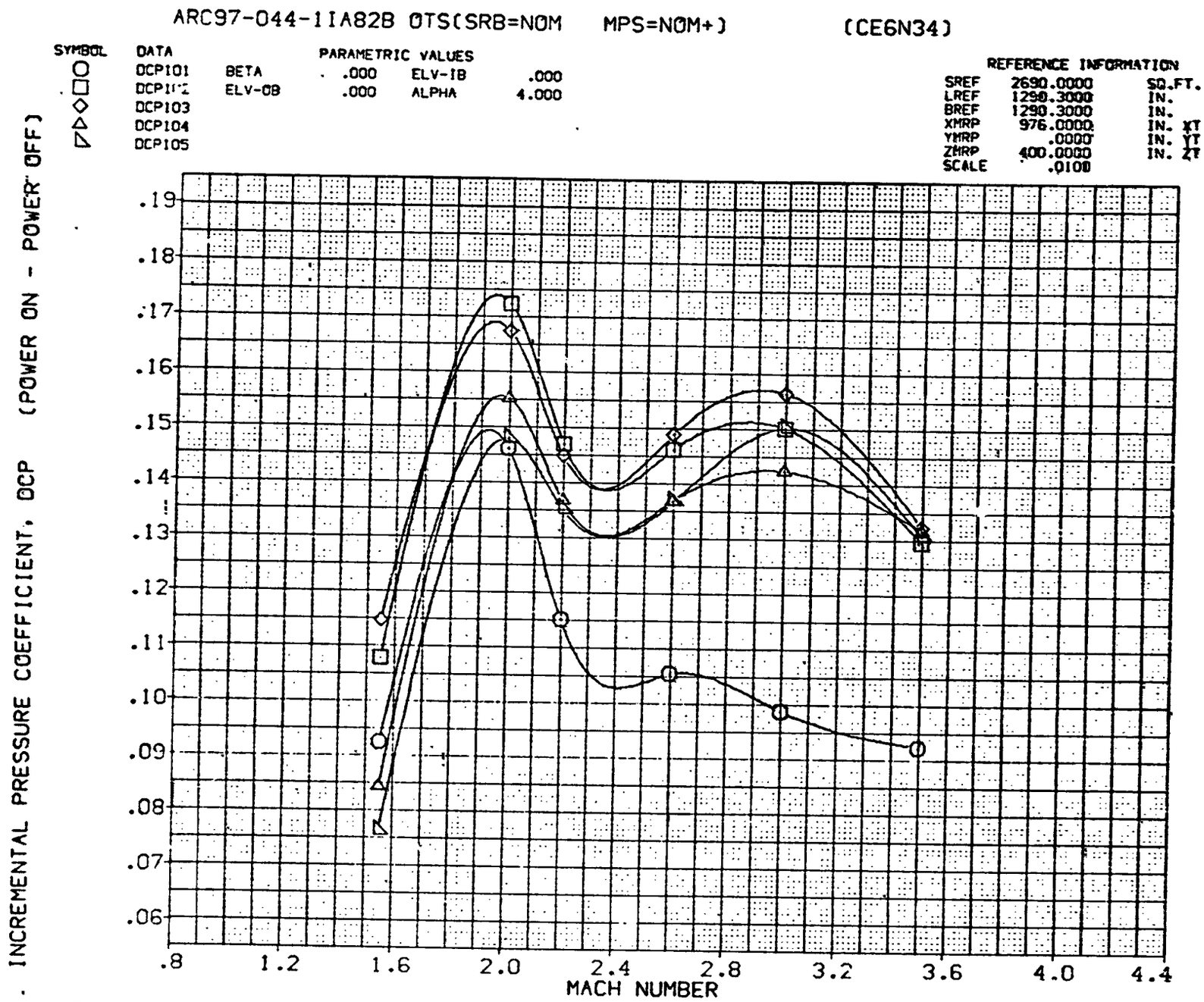


FIG. 79 ORBITER INCREMENTAL BASE PRESS. COEF.(LOWER), SRB=NOM, MPS=NOM+

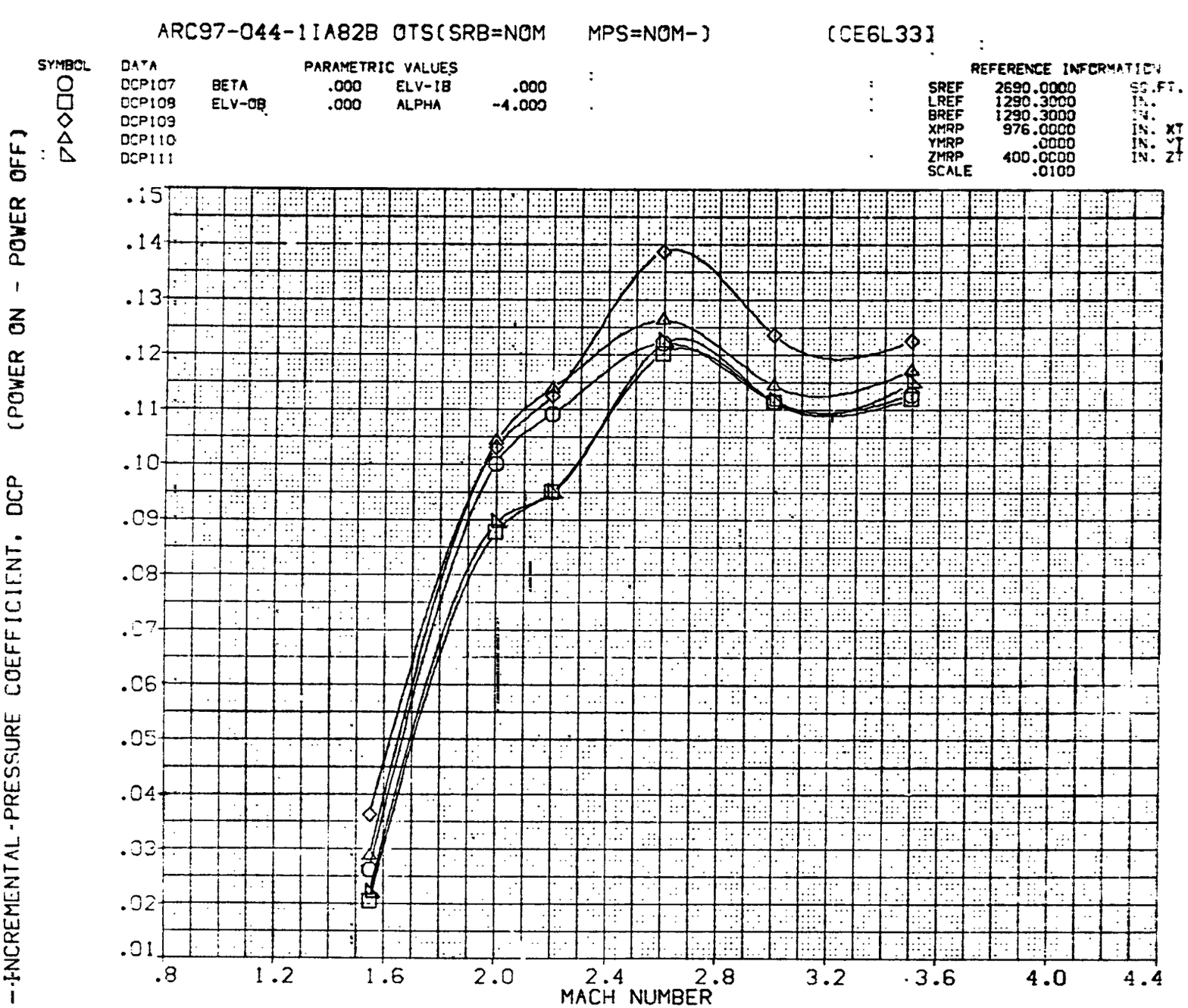


FIG. 80 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM-

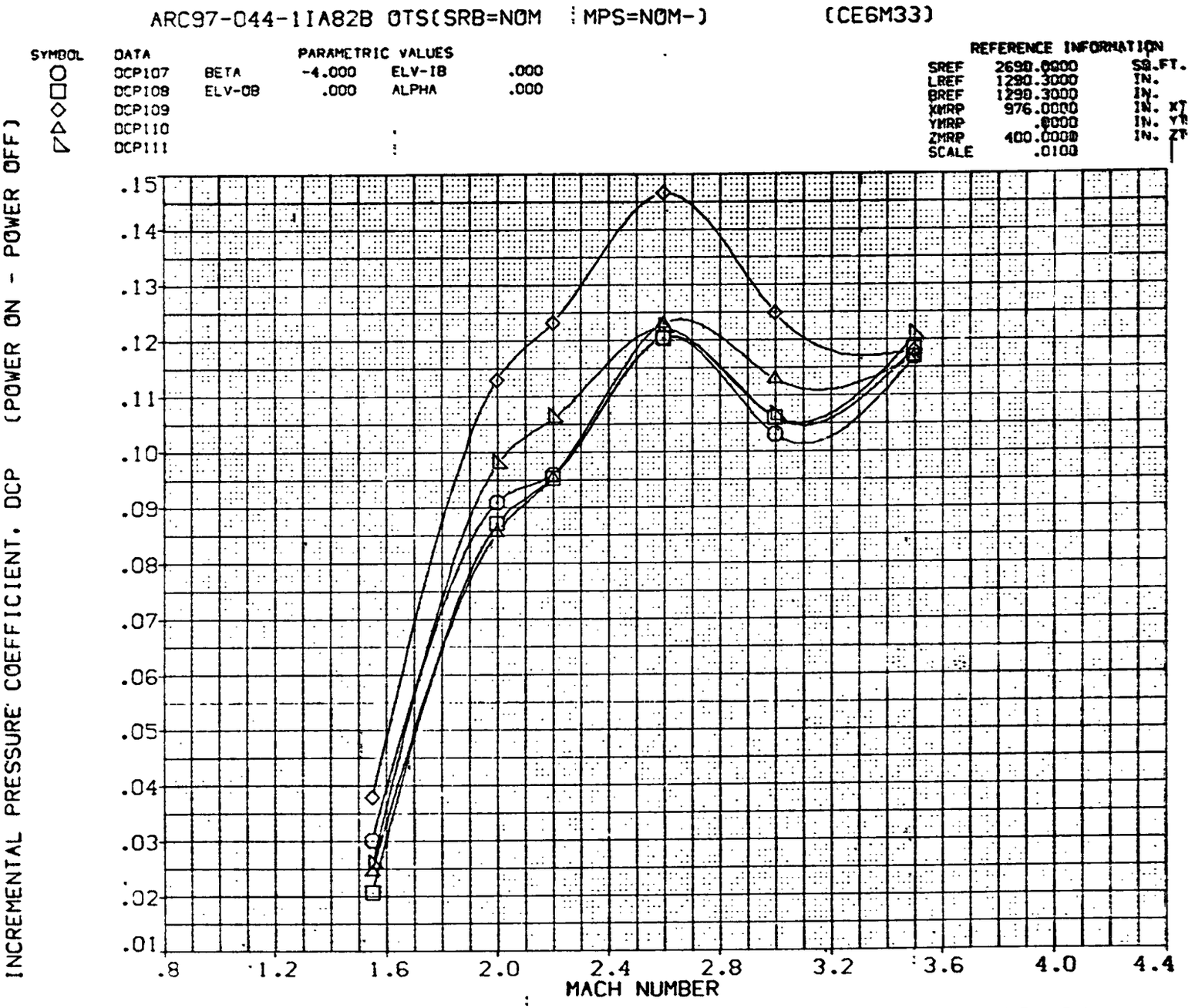


FIG. 80 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM-

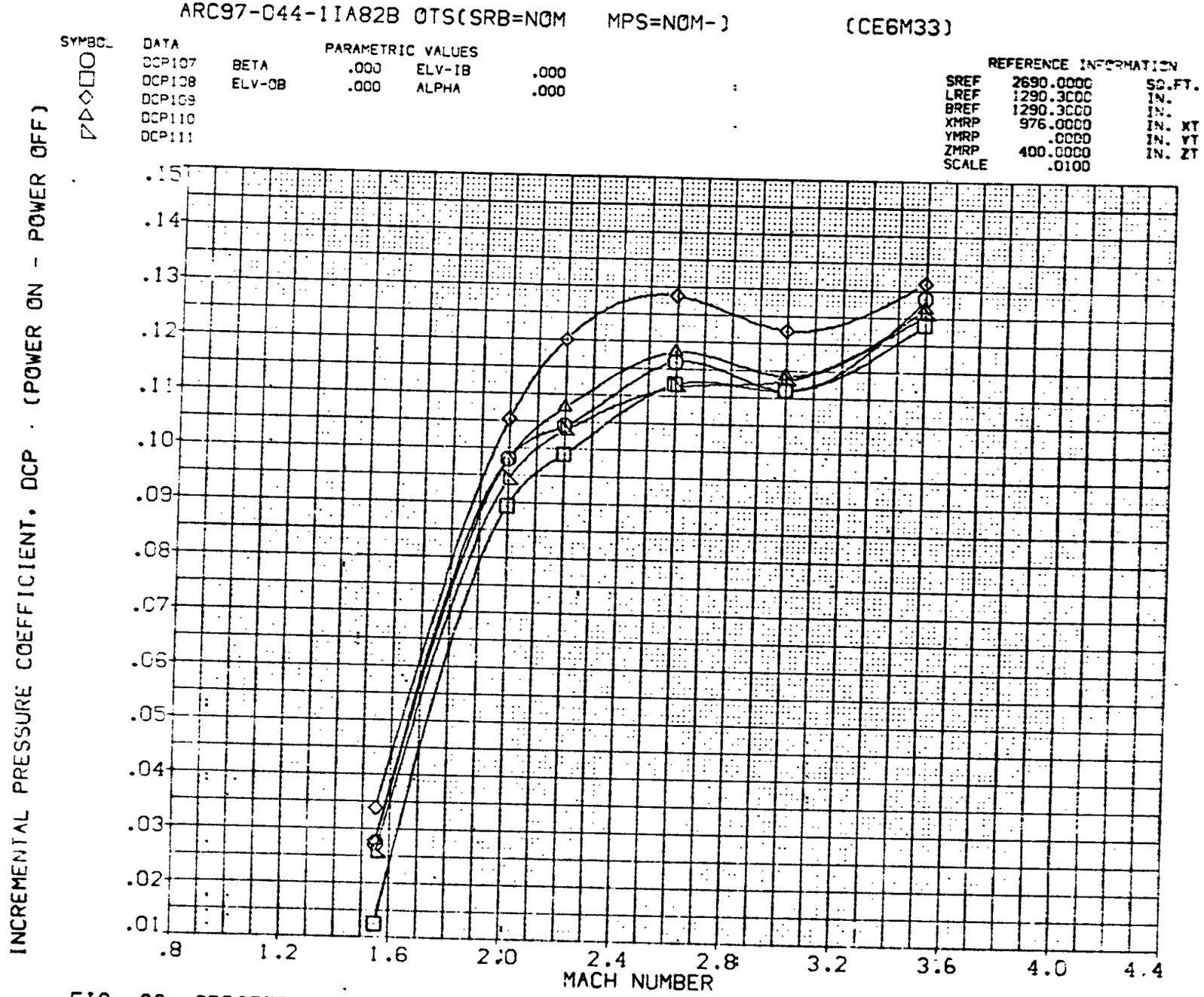


FIG. 80 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM-

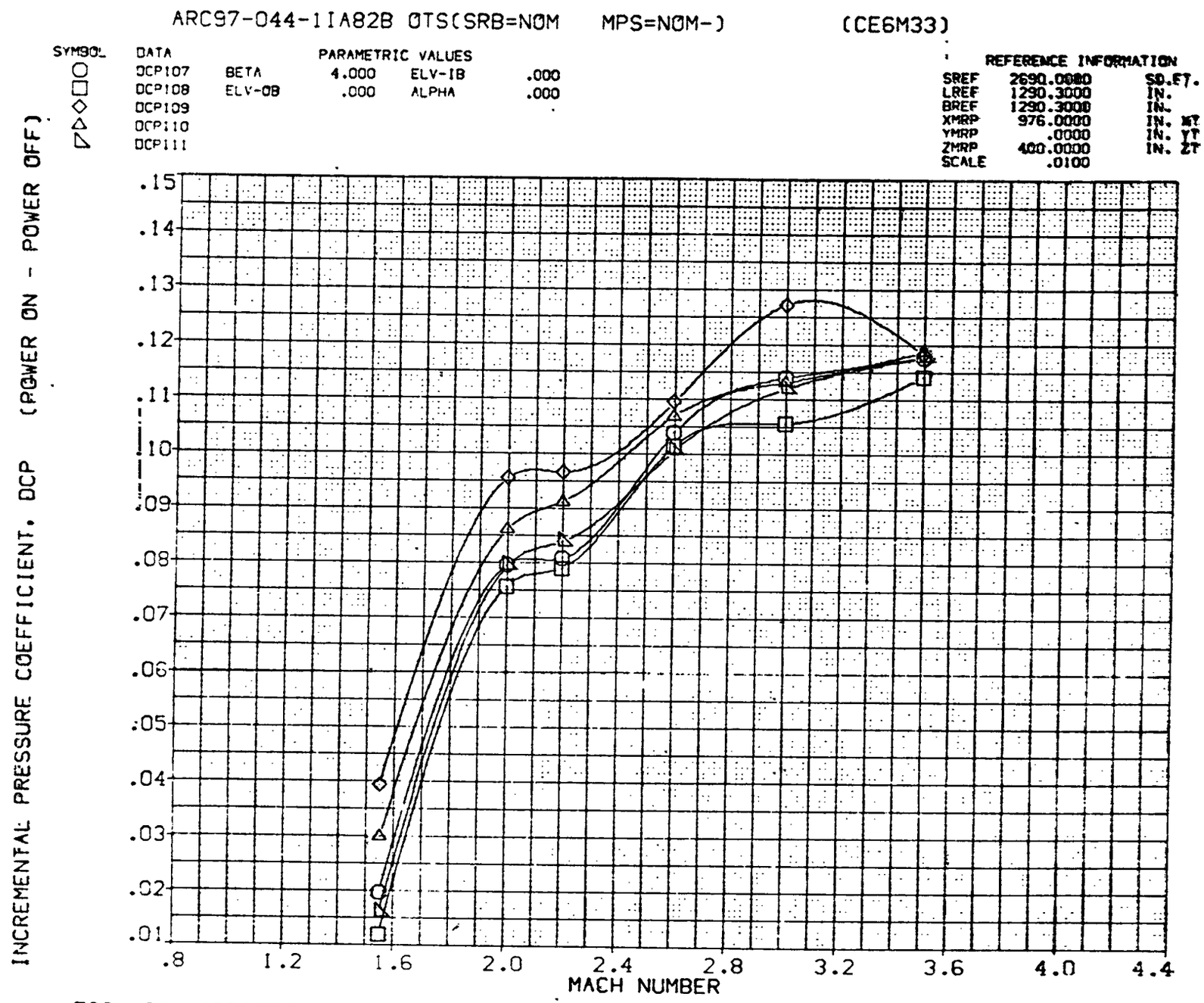


FIG. 80 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM-

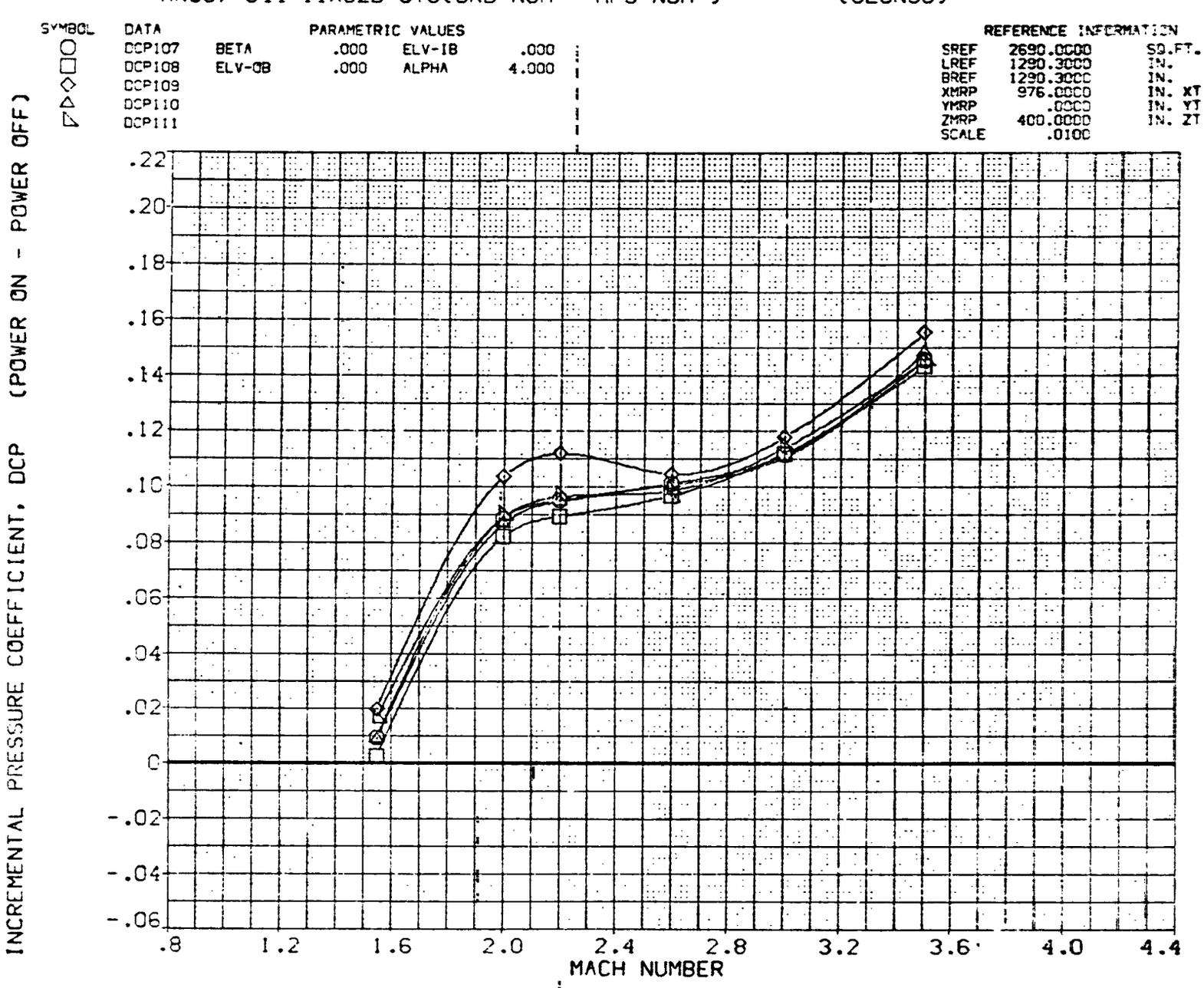


FIG. 80 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM-

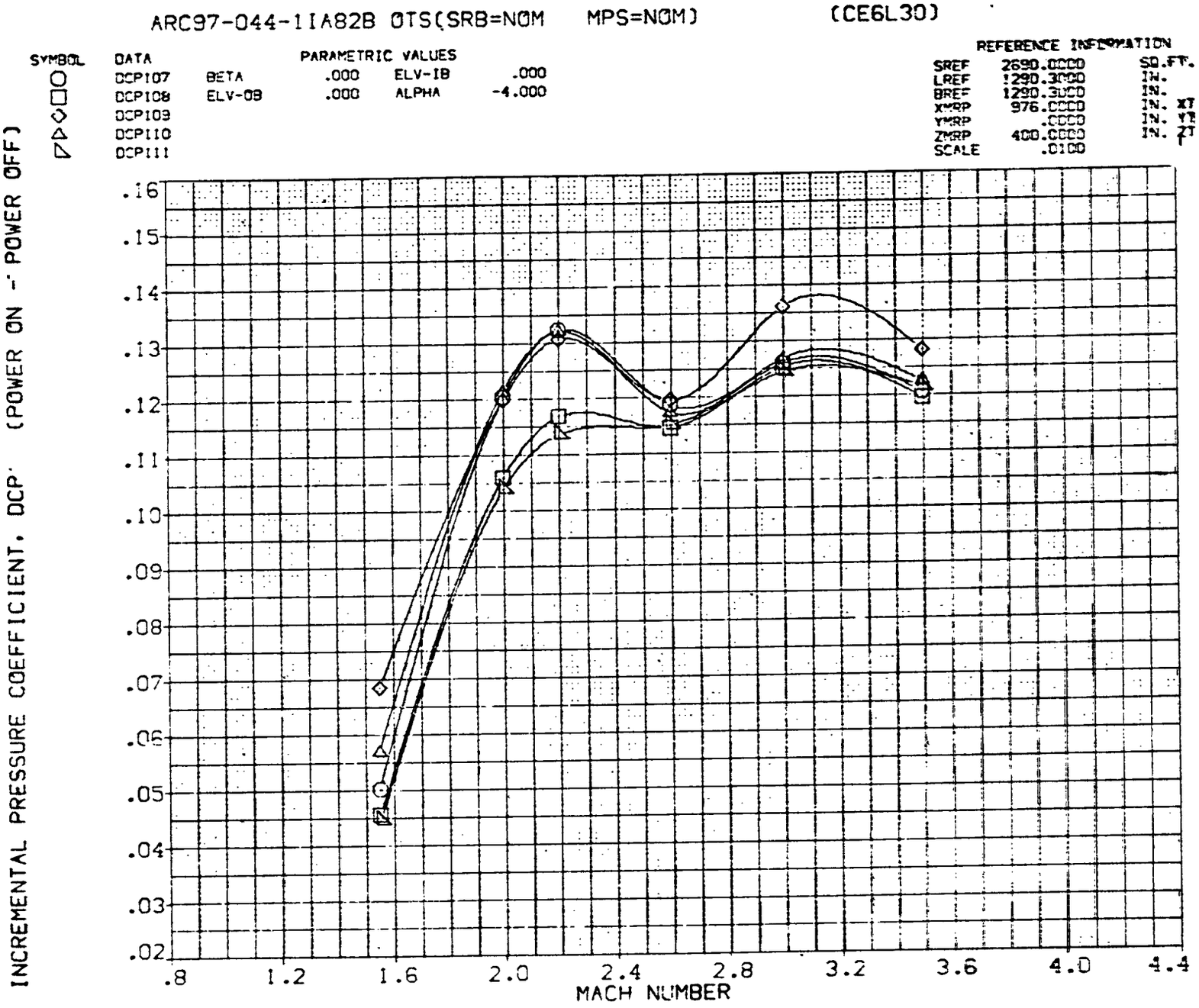


FIG. 81 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM

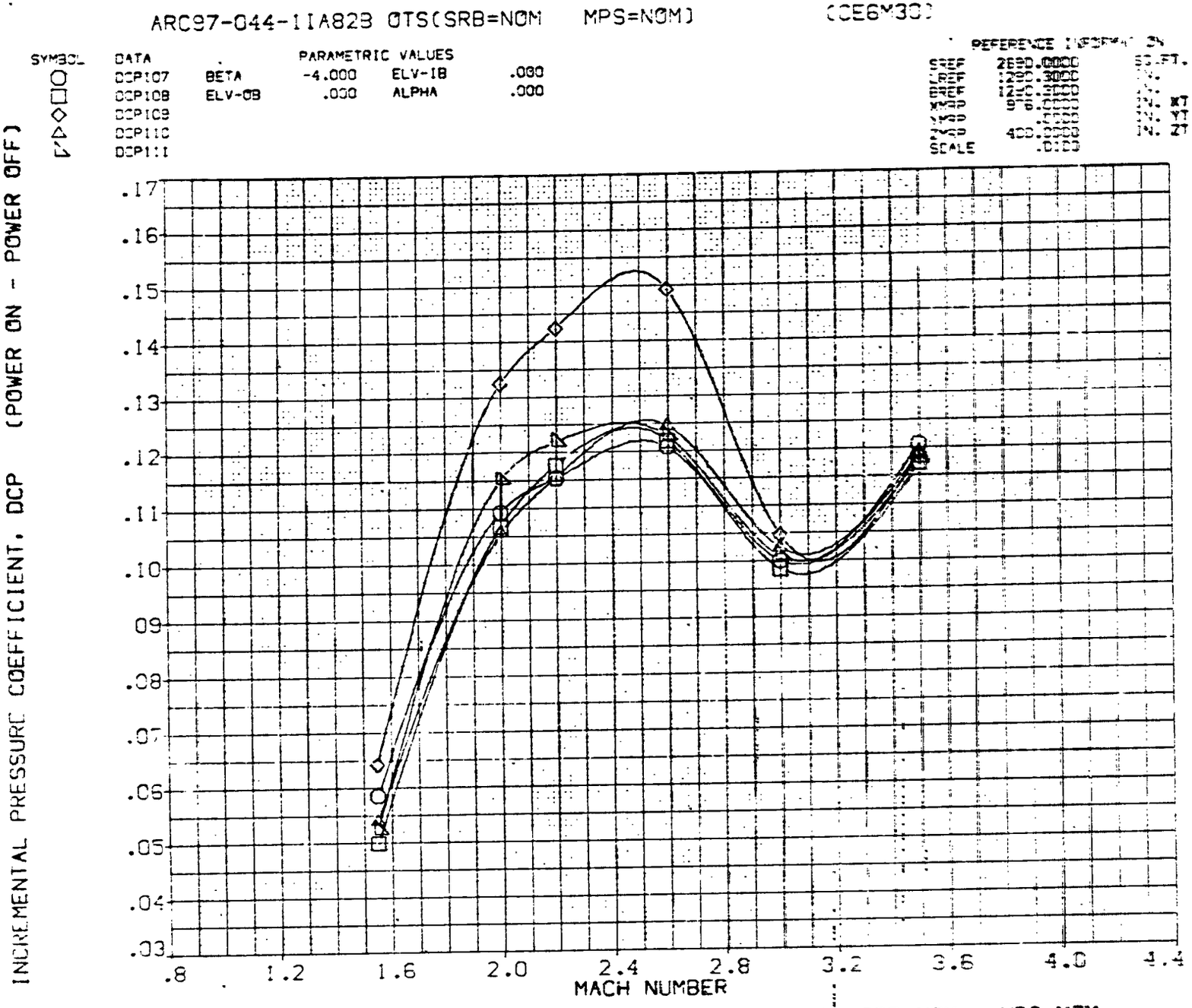


FIG. 81 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM. MPS=NOM

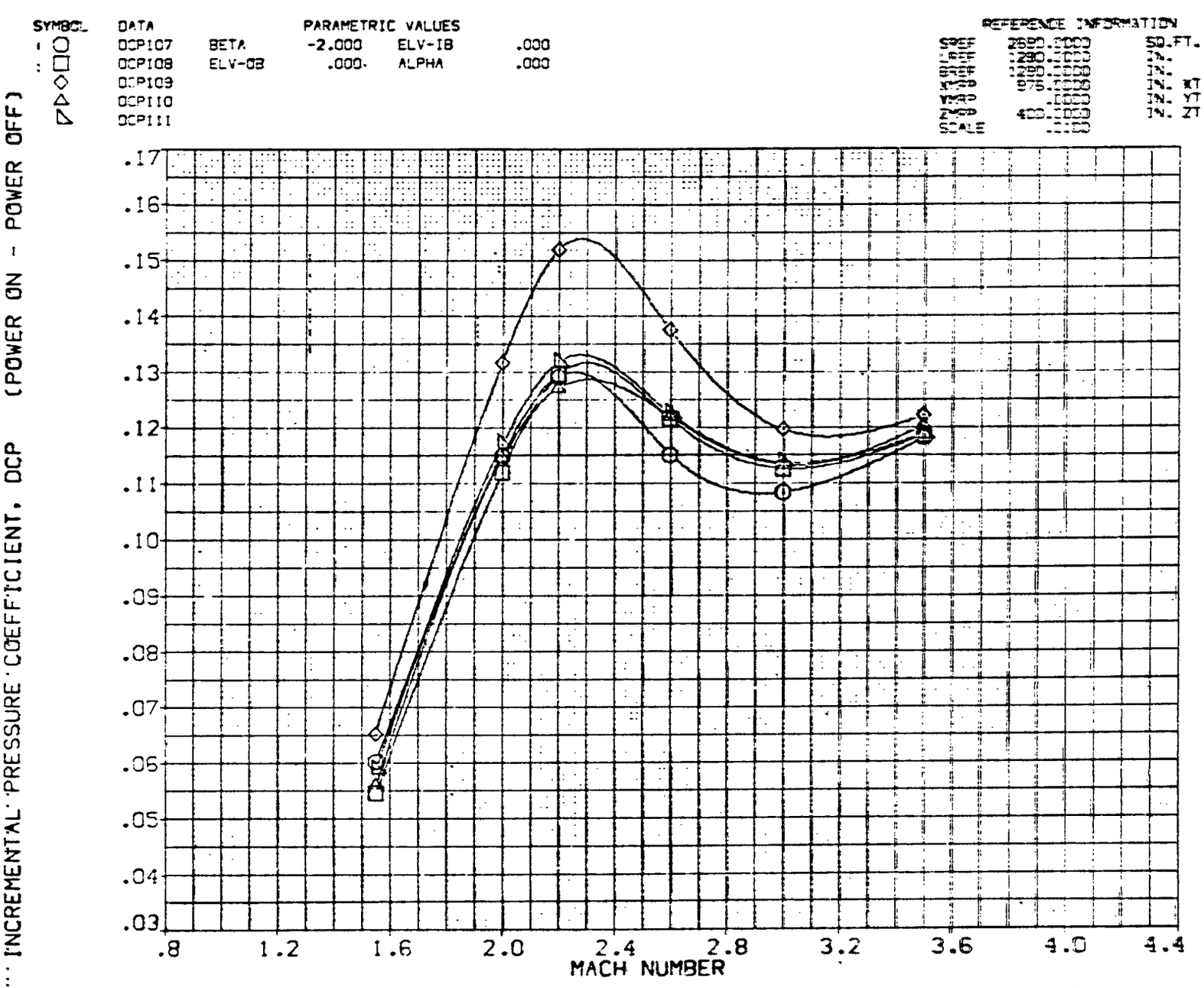


FIG. 81 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM

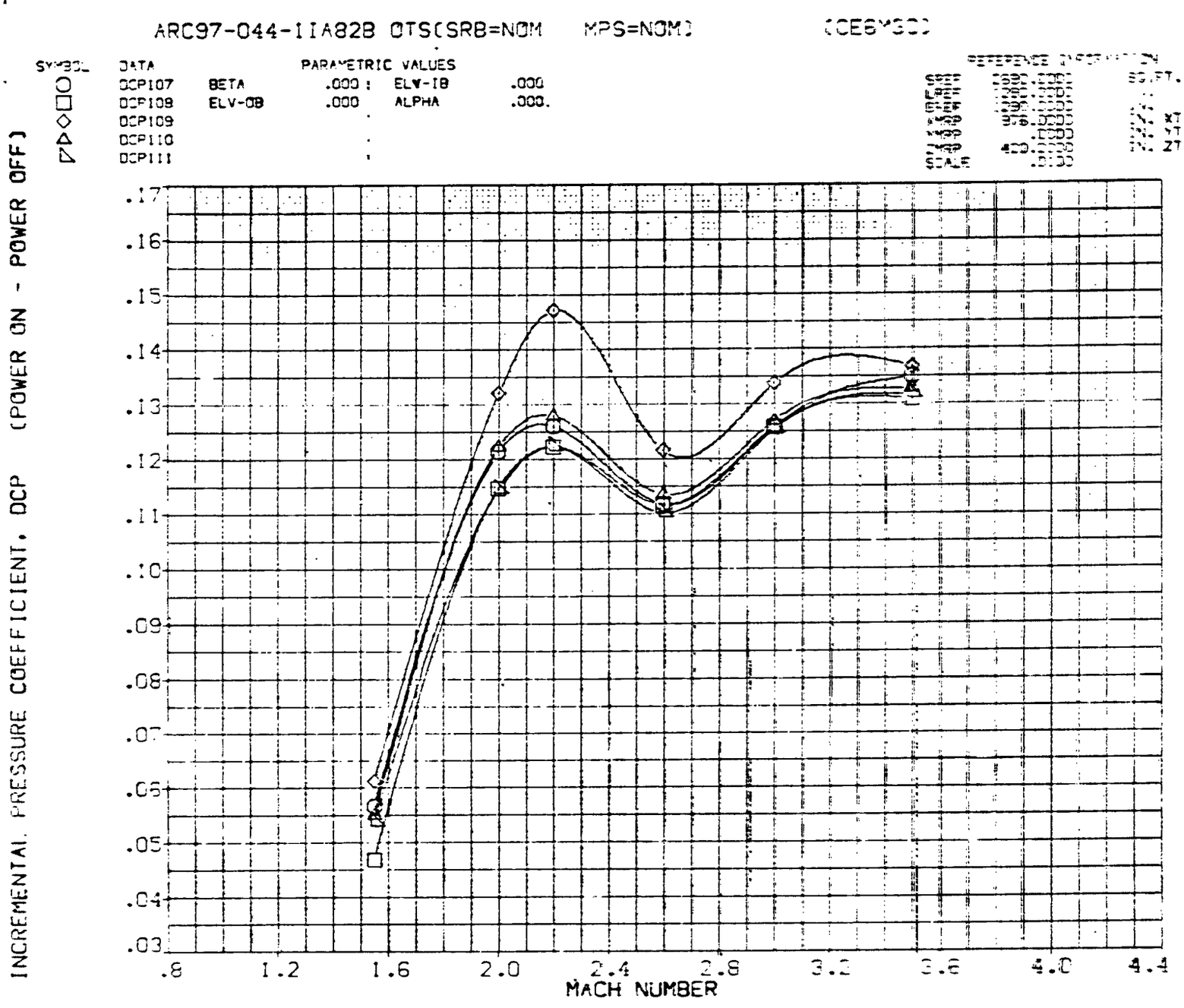


FIG. 81 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM

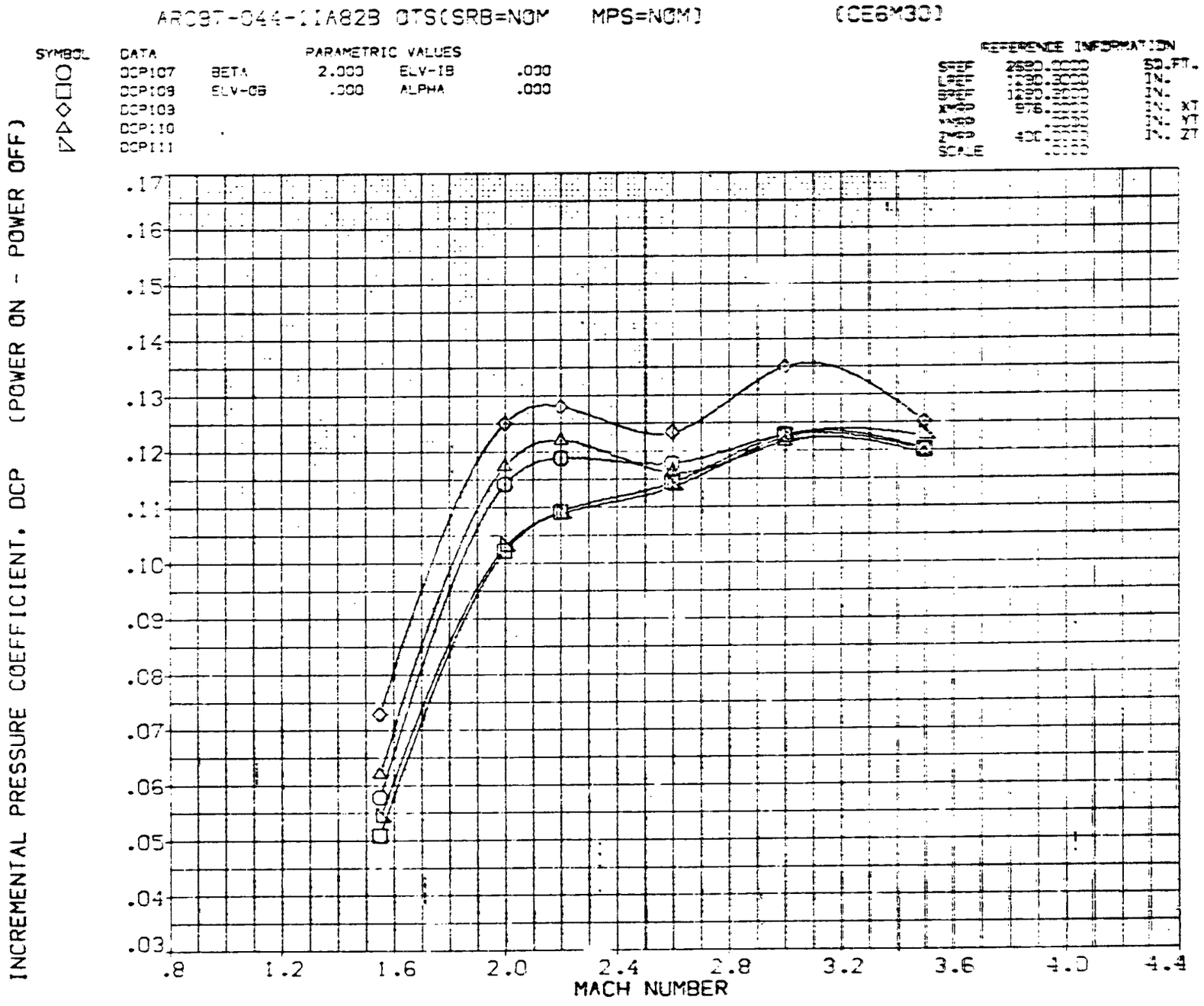


FIG. 81 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE). SRB=NOM. MPS=NOM

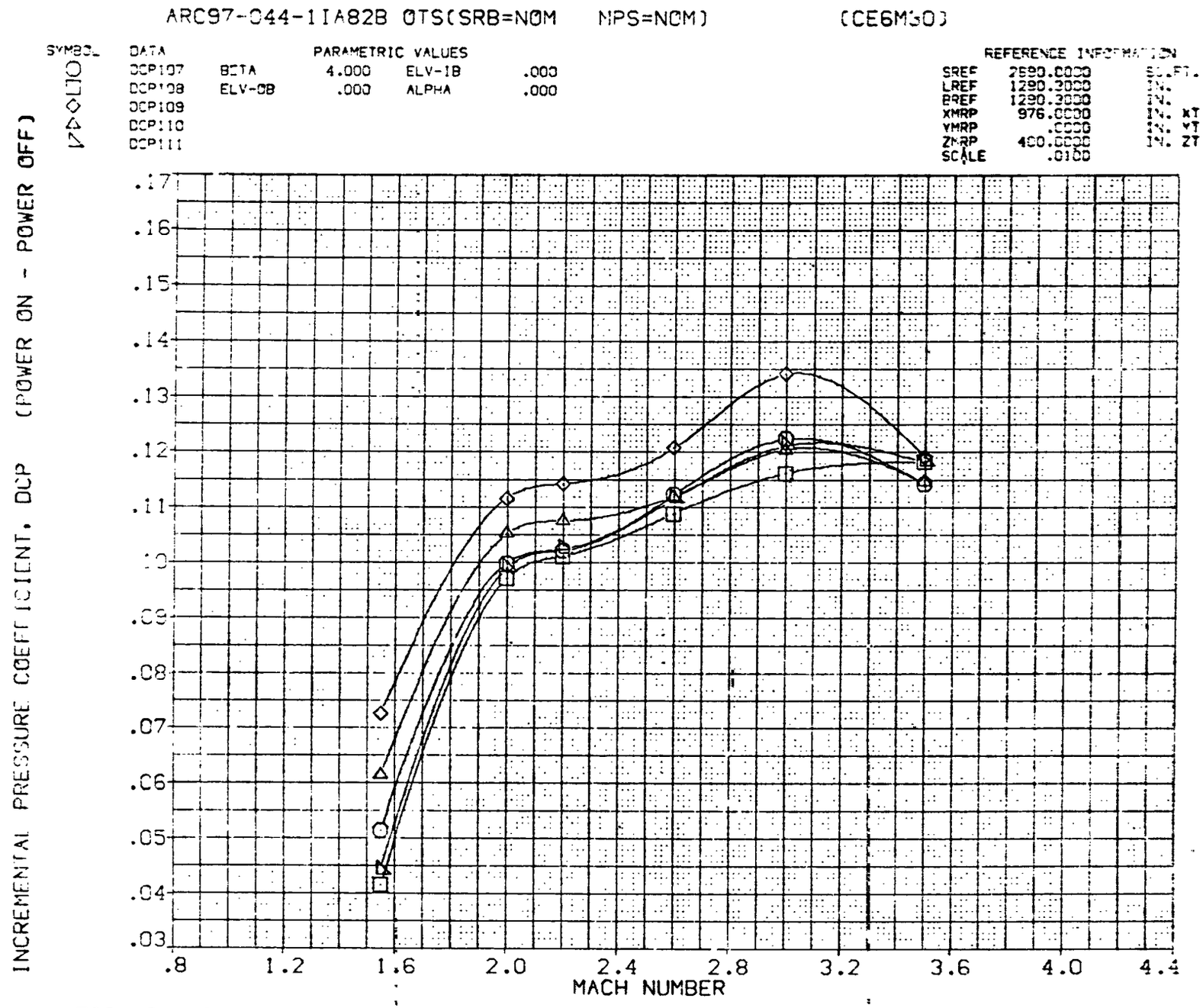


FIG. 81 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM

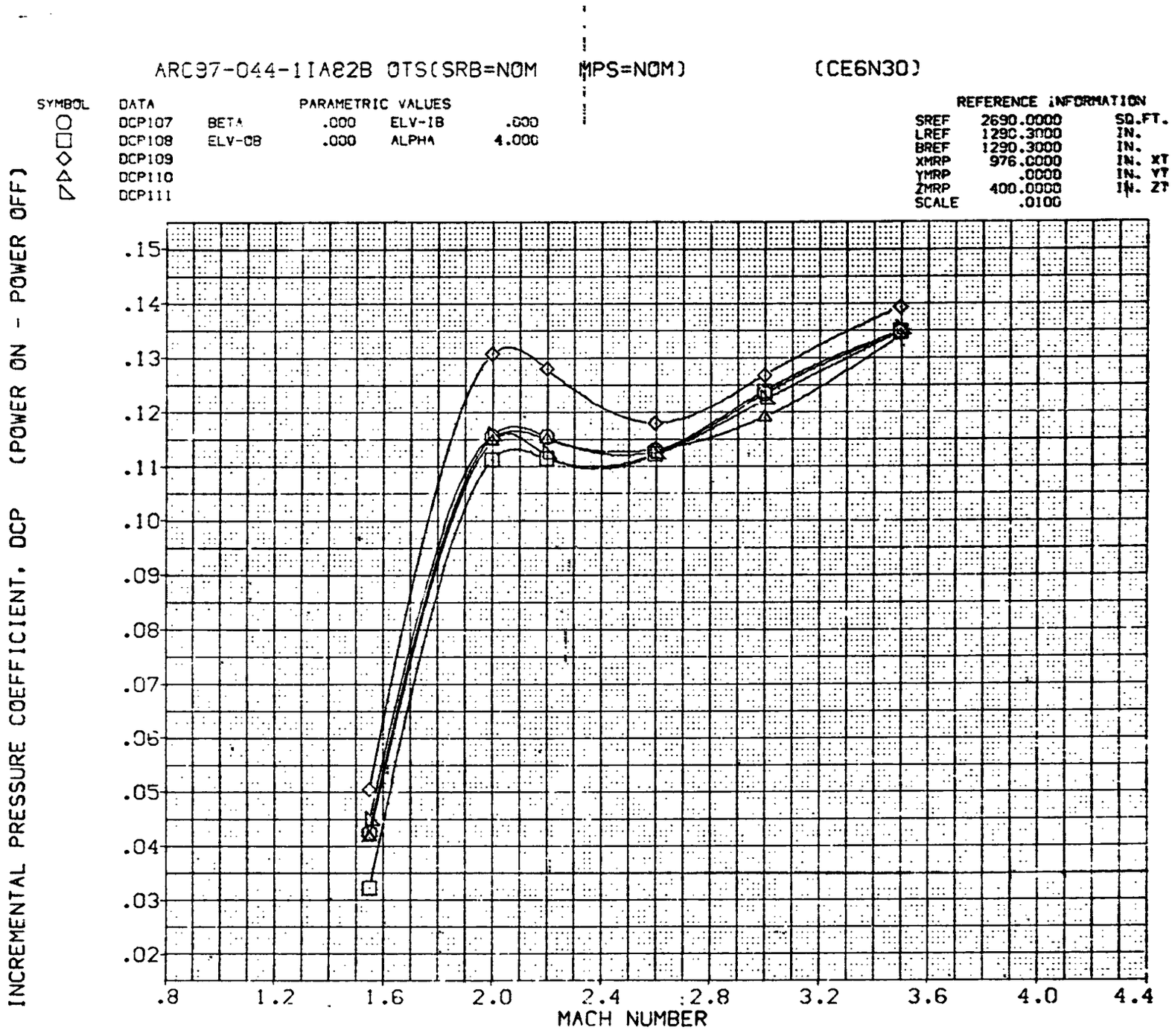


FIG. 81 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM

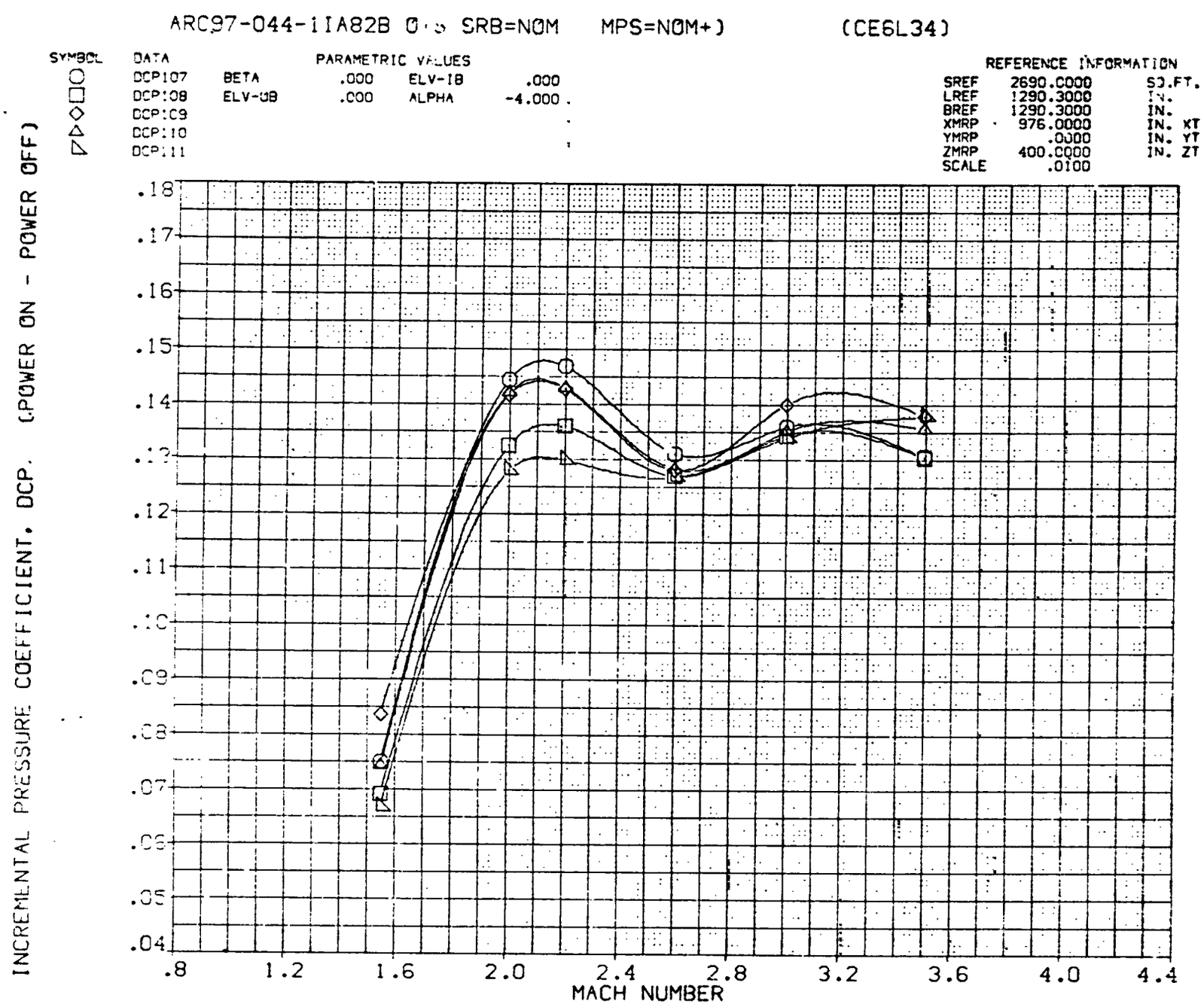


FIG. 82 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=N0M, MPS=N0M+

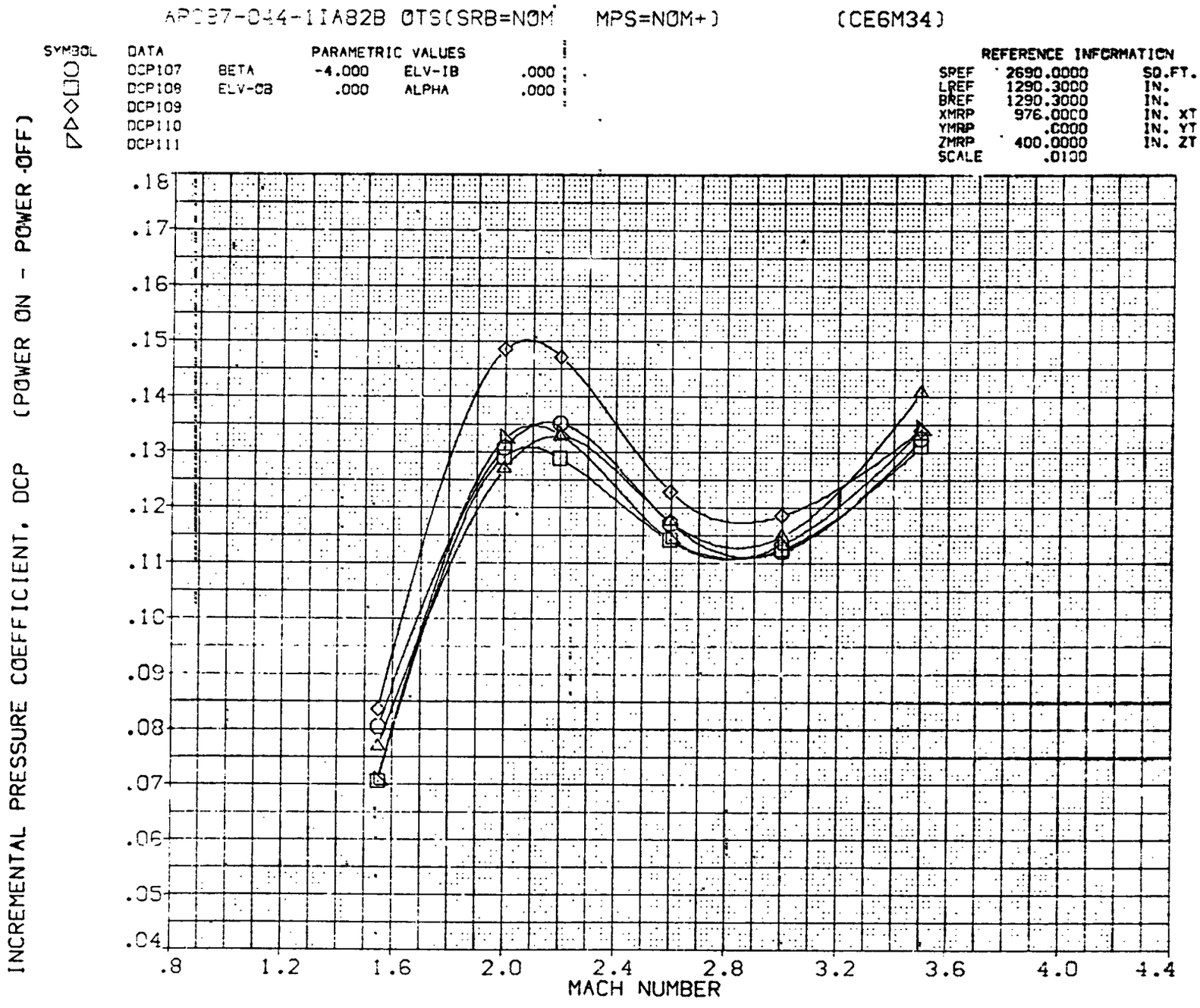


FIG. 82 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM+

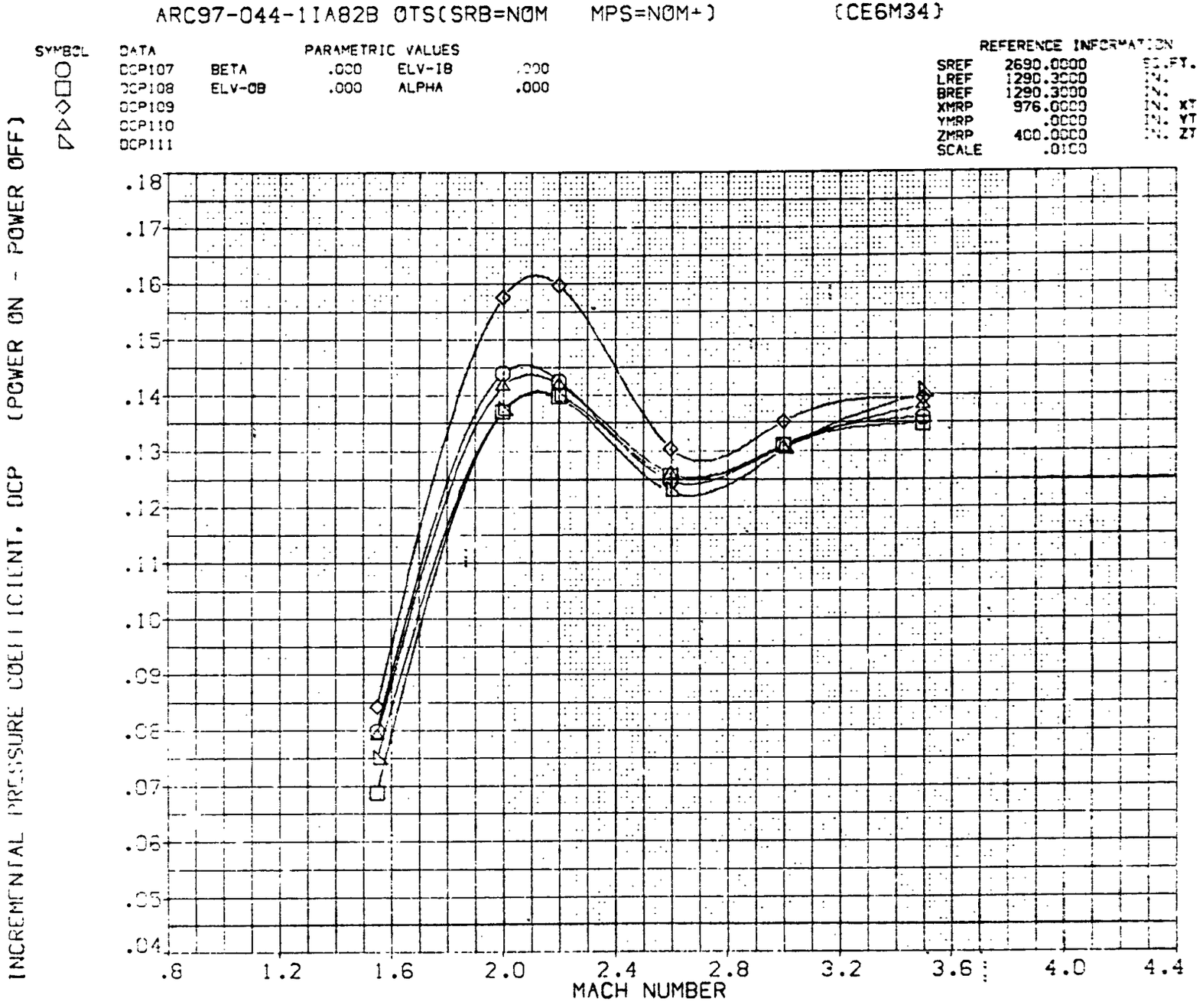


FIG. 82 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE). SRB=NOM. MPS=NOM+

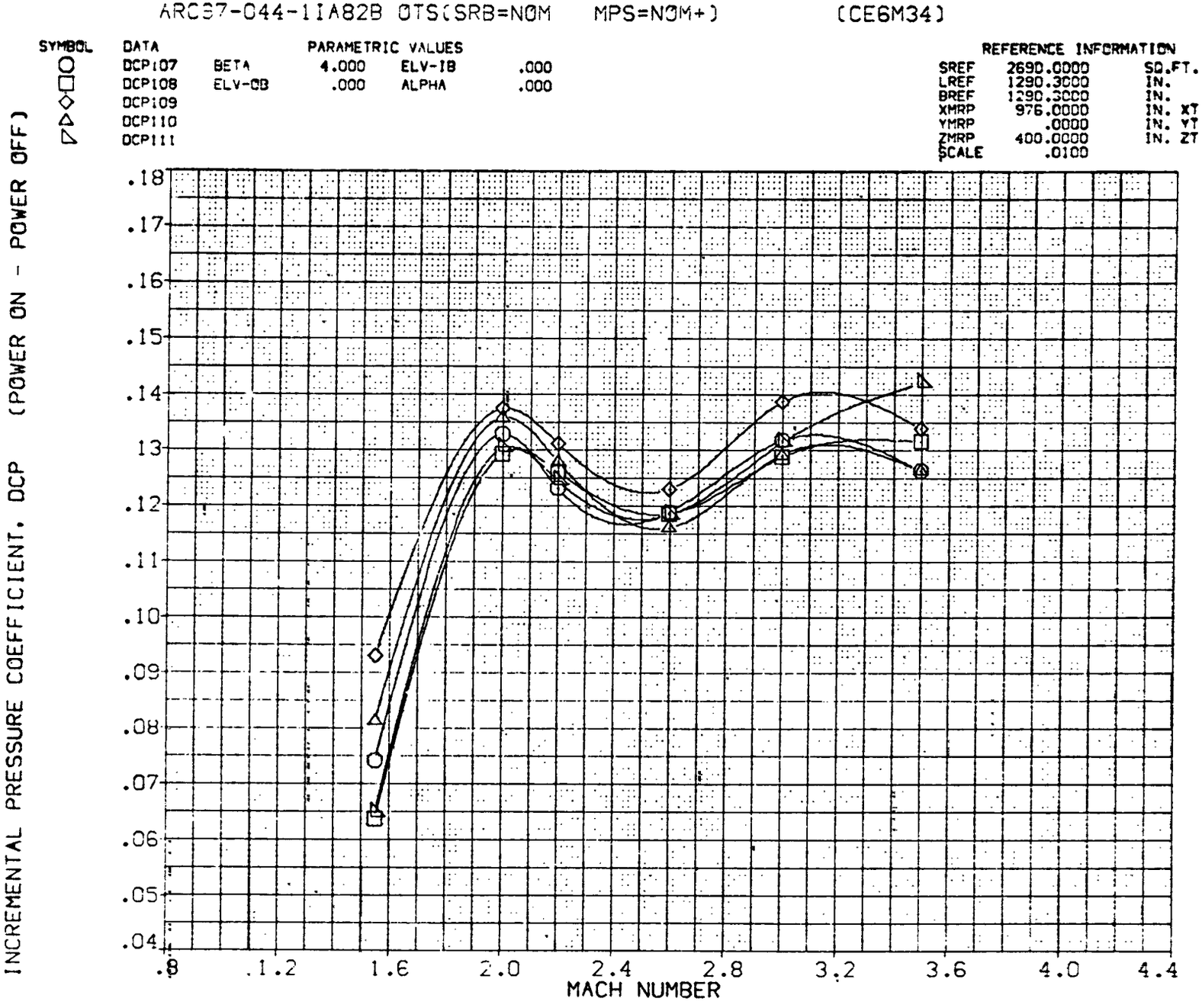


FIG. 82 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=NOM, MPS=NOM+

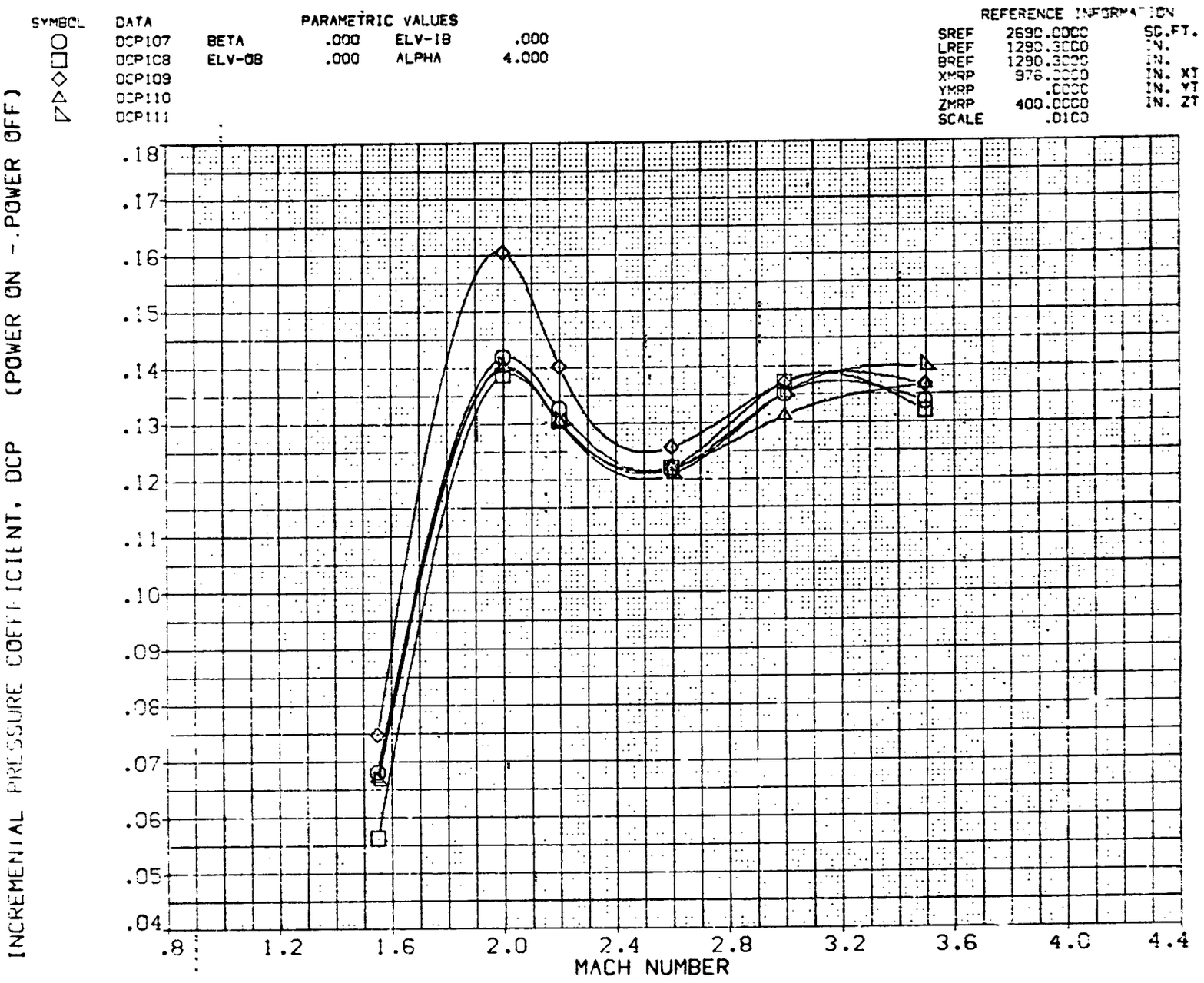


FIG. 82 ORBITER INCREMENTAL BASE PRESS. COEF.(MIDDLE), SRB=N0M, MPS=N0M+

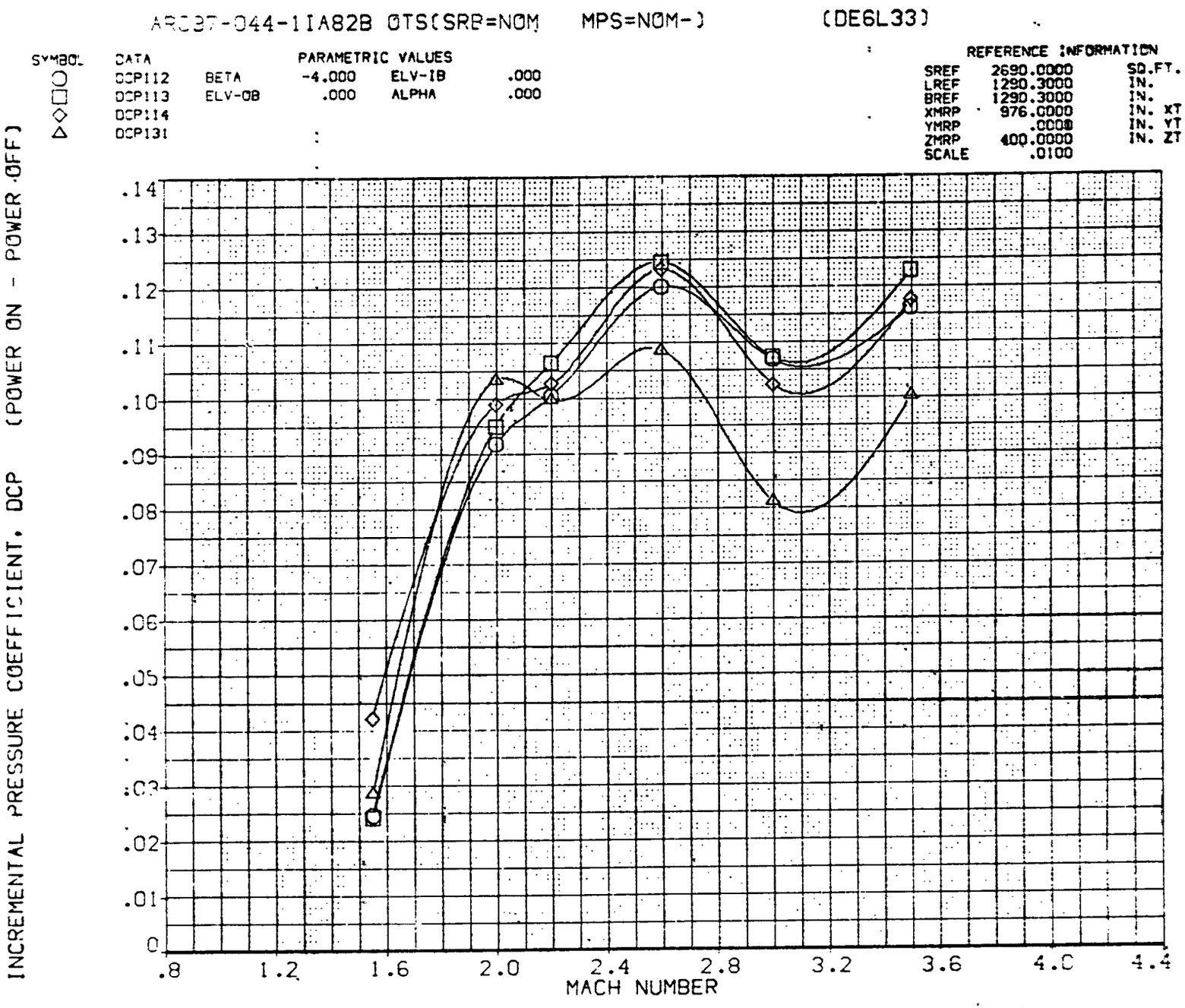


FIG. 83 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM-

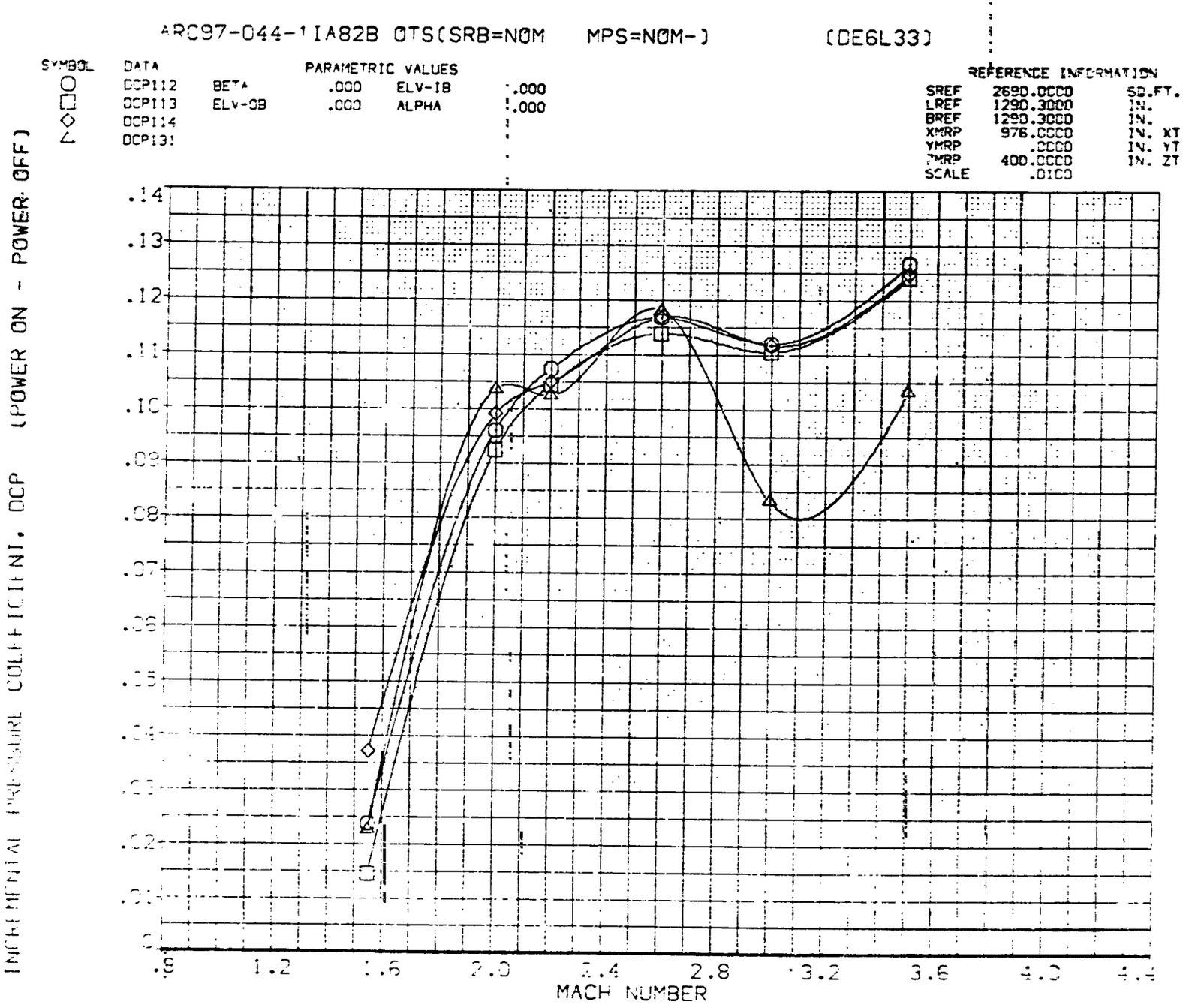


FIG. 83 ORBITER INCREMENTAL BASE PRESS. COEF.(DCP) SRB=NOM, MPS=NOM-

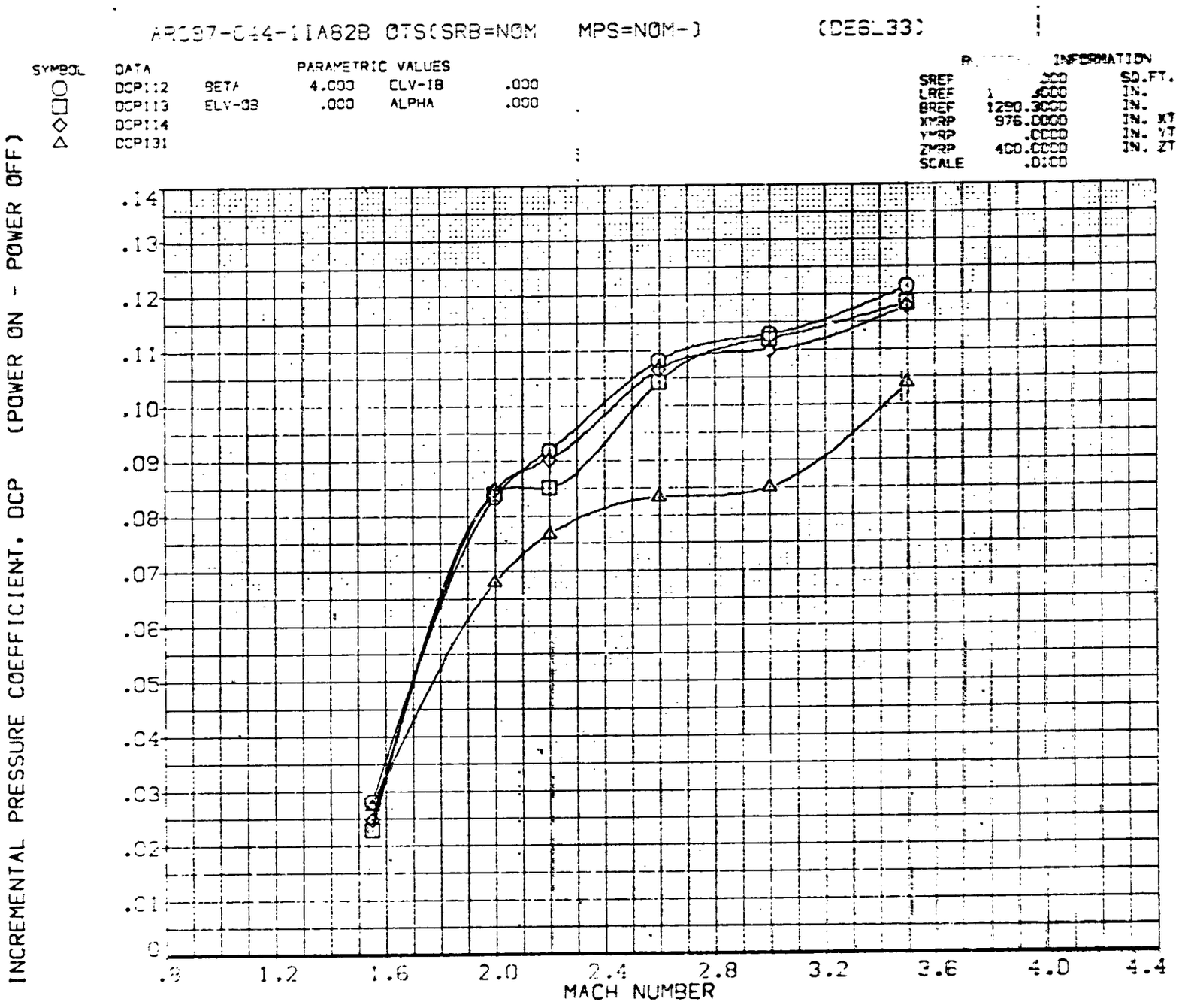


FIG. 83 ORBITER INCREMENTAL BASE PRESS. COEF.(DCP) SRB=NOM, MPS=NOM-

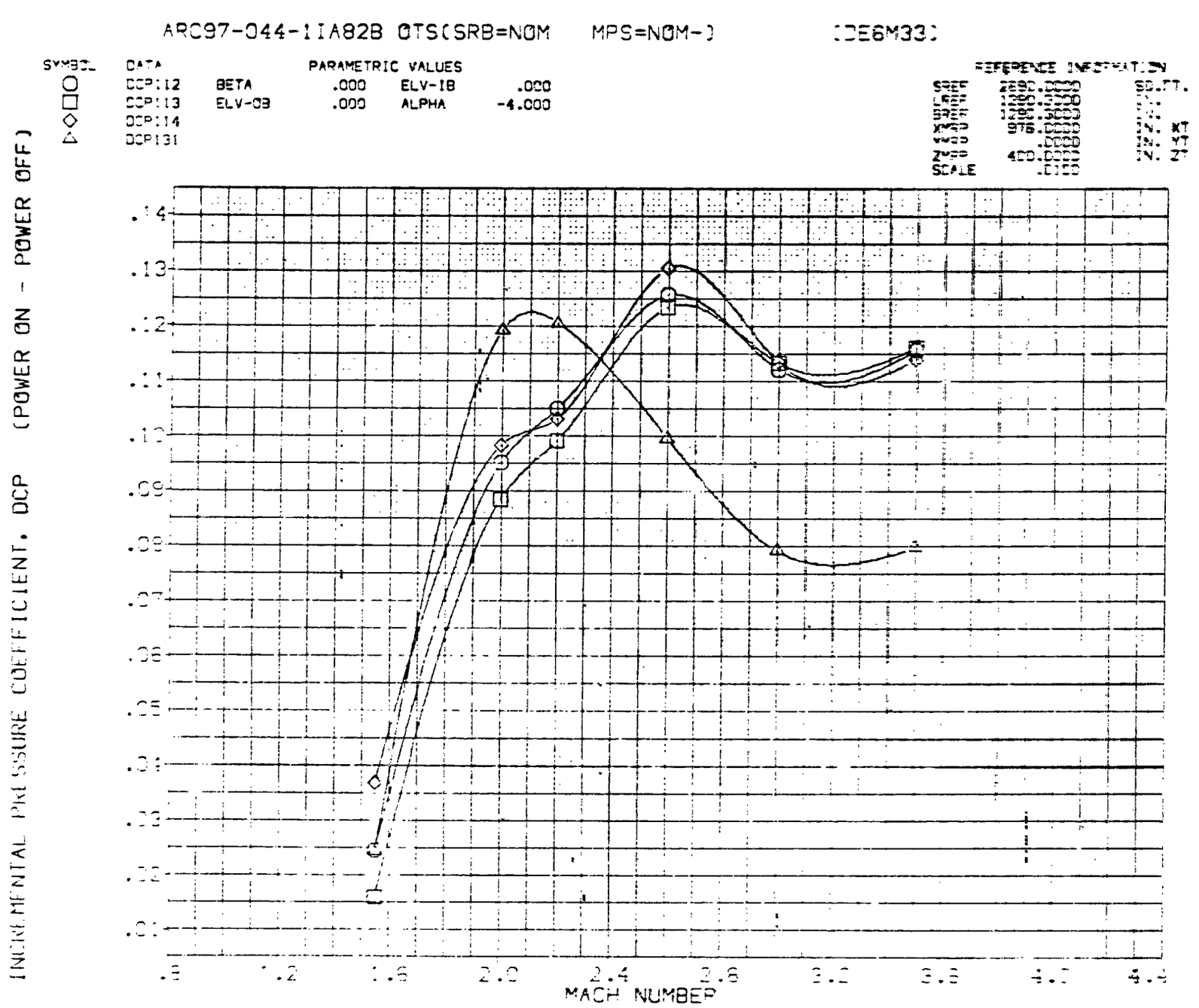


FIG. 83 ORBITER INCREMENTAL BASE PRESS. COEF.(TCP) SRB=NOM. MPS=NOM-

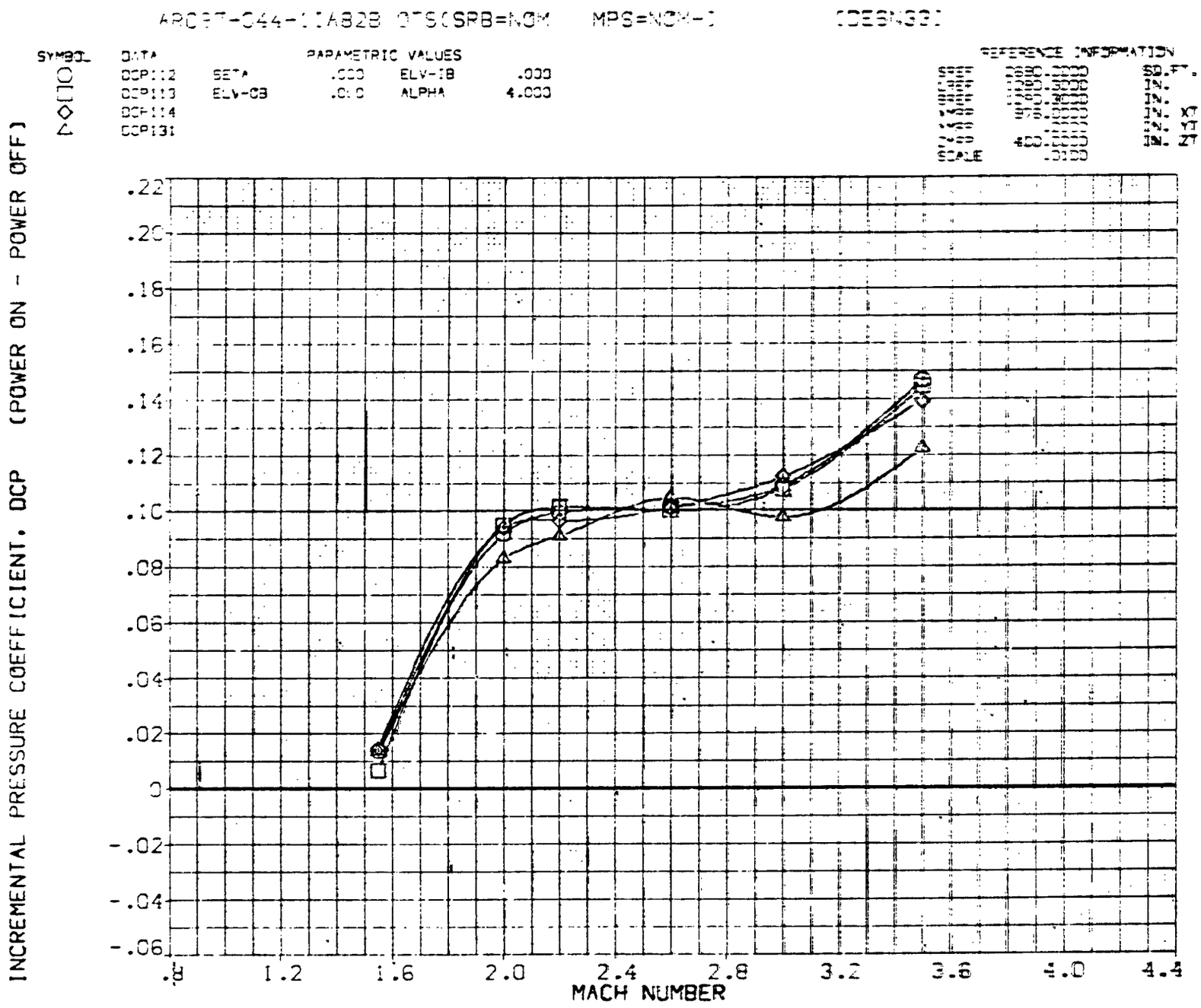


FIG. 83 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM-

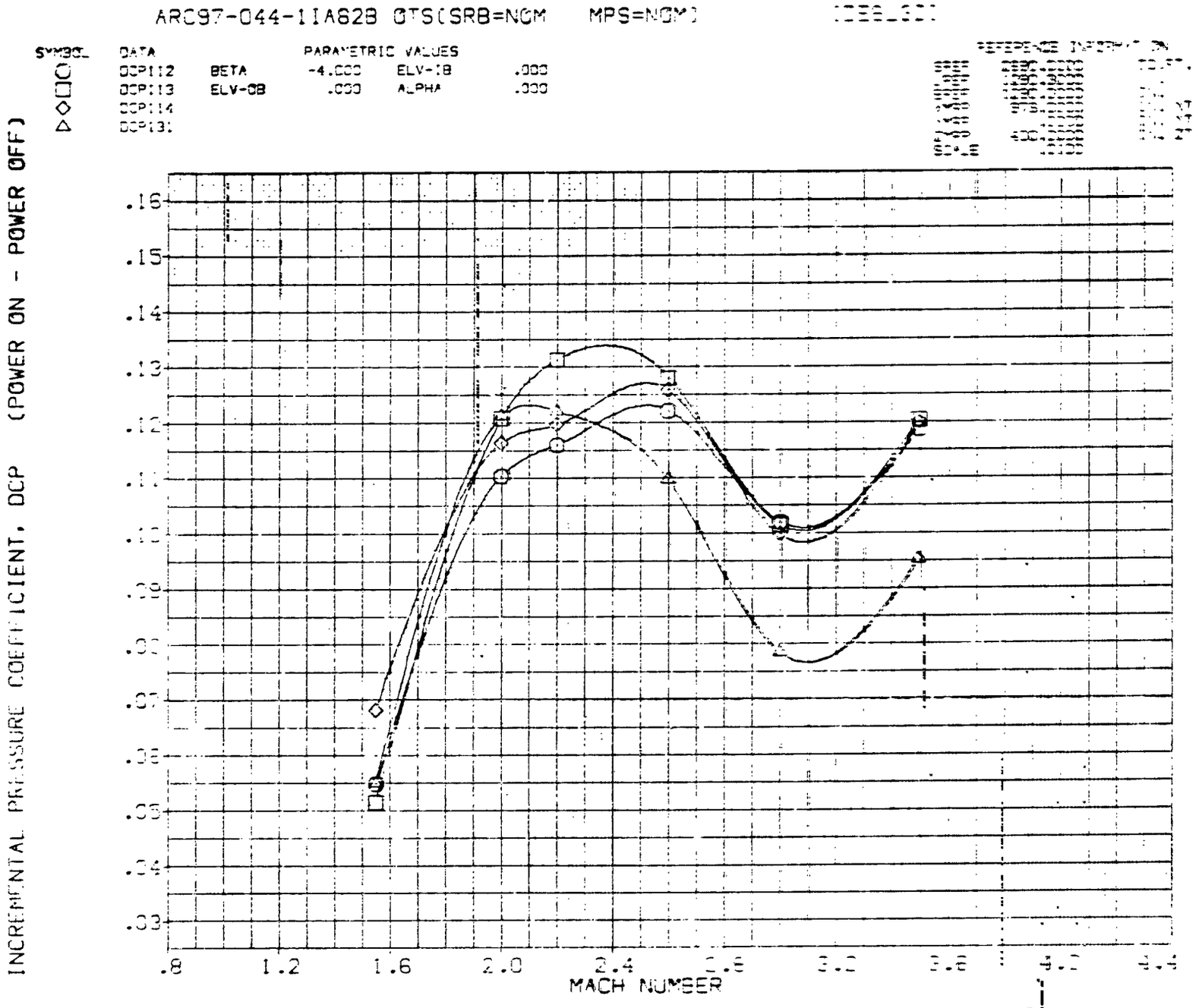


FIG. 84 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=2M L.

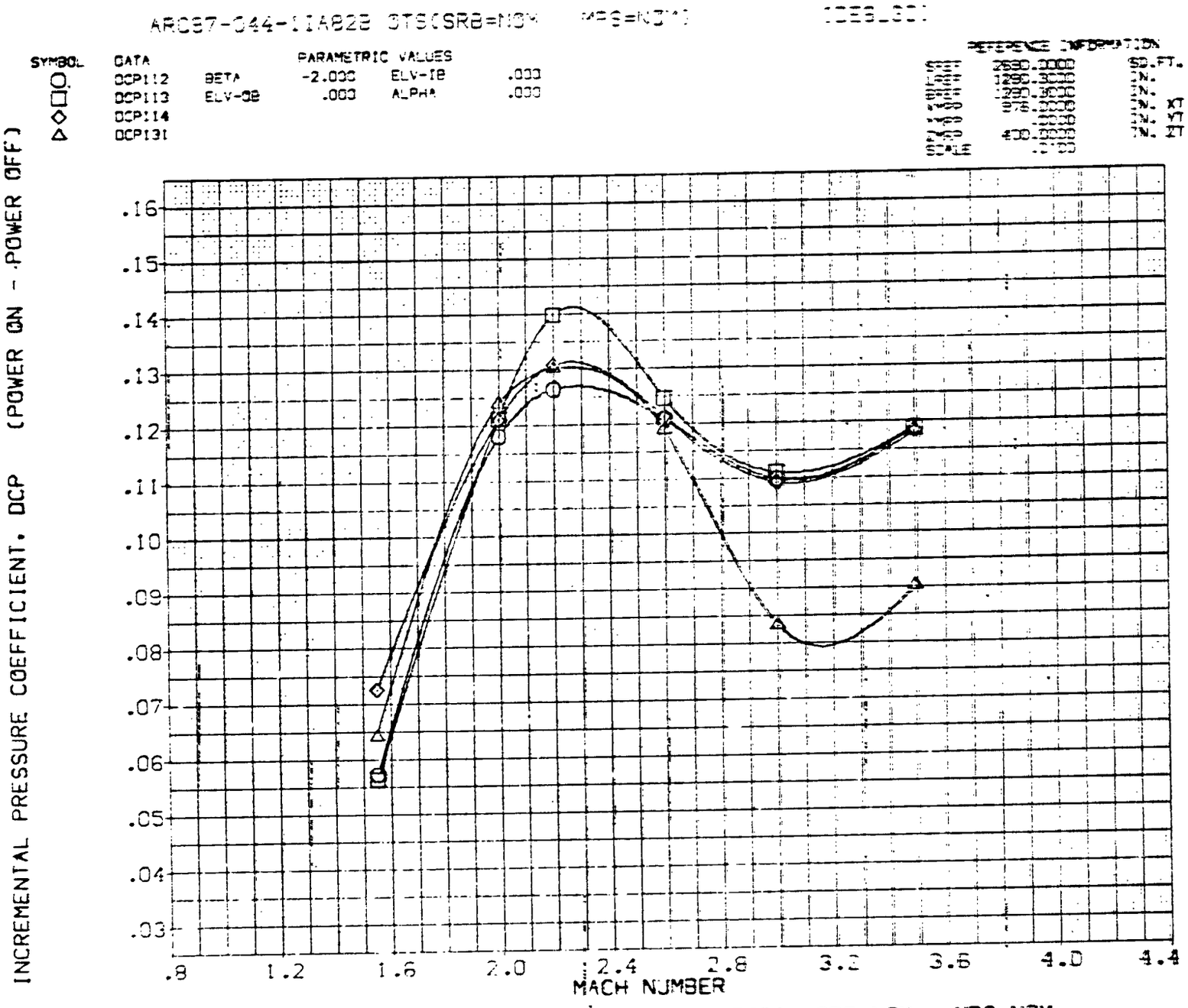


FIG. 84 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM. MPS=NOM

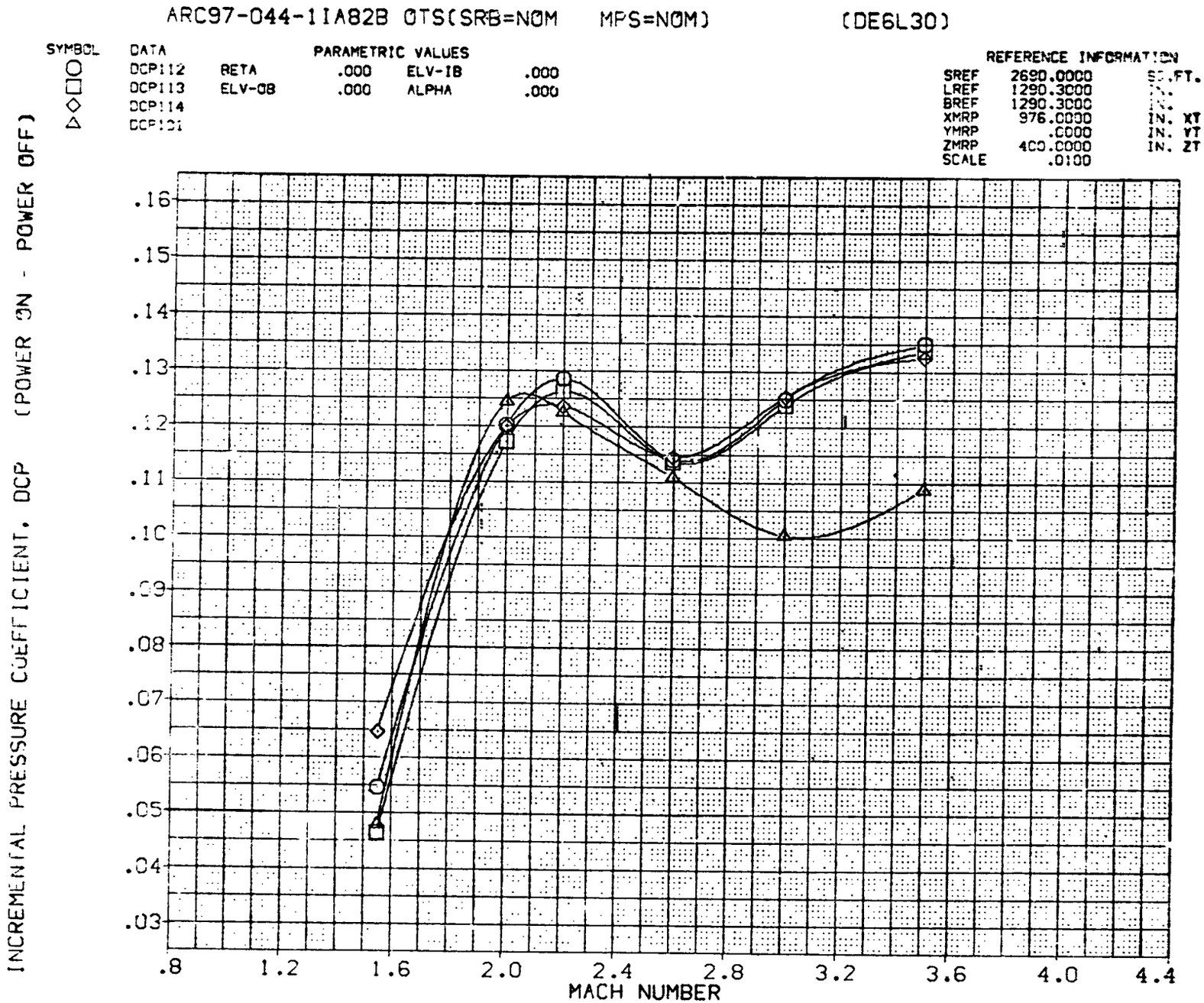


FIG. 84 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM

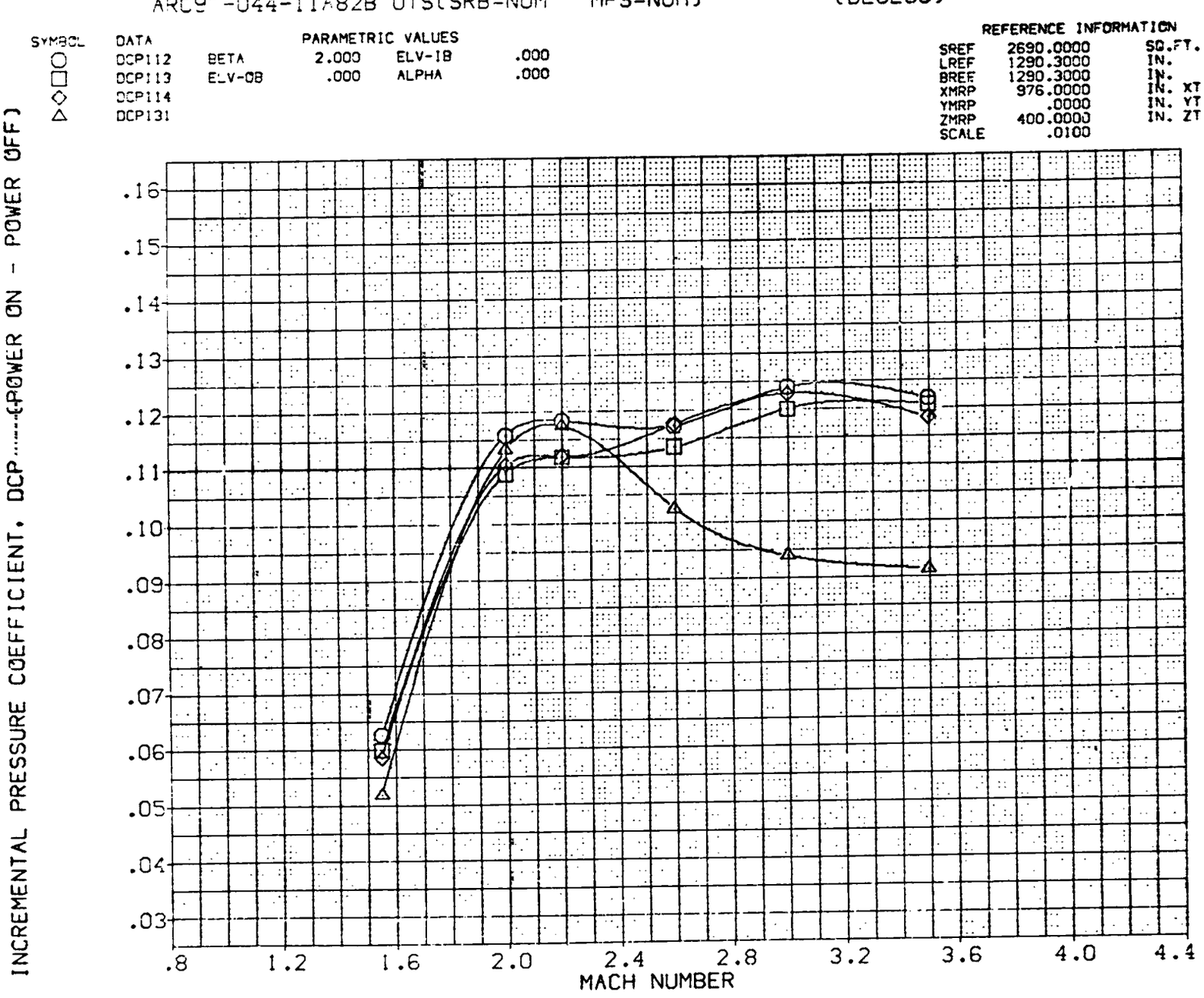


FIG. 84 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM

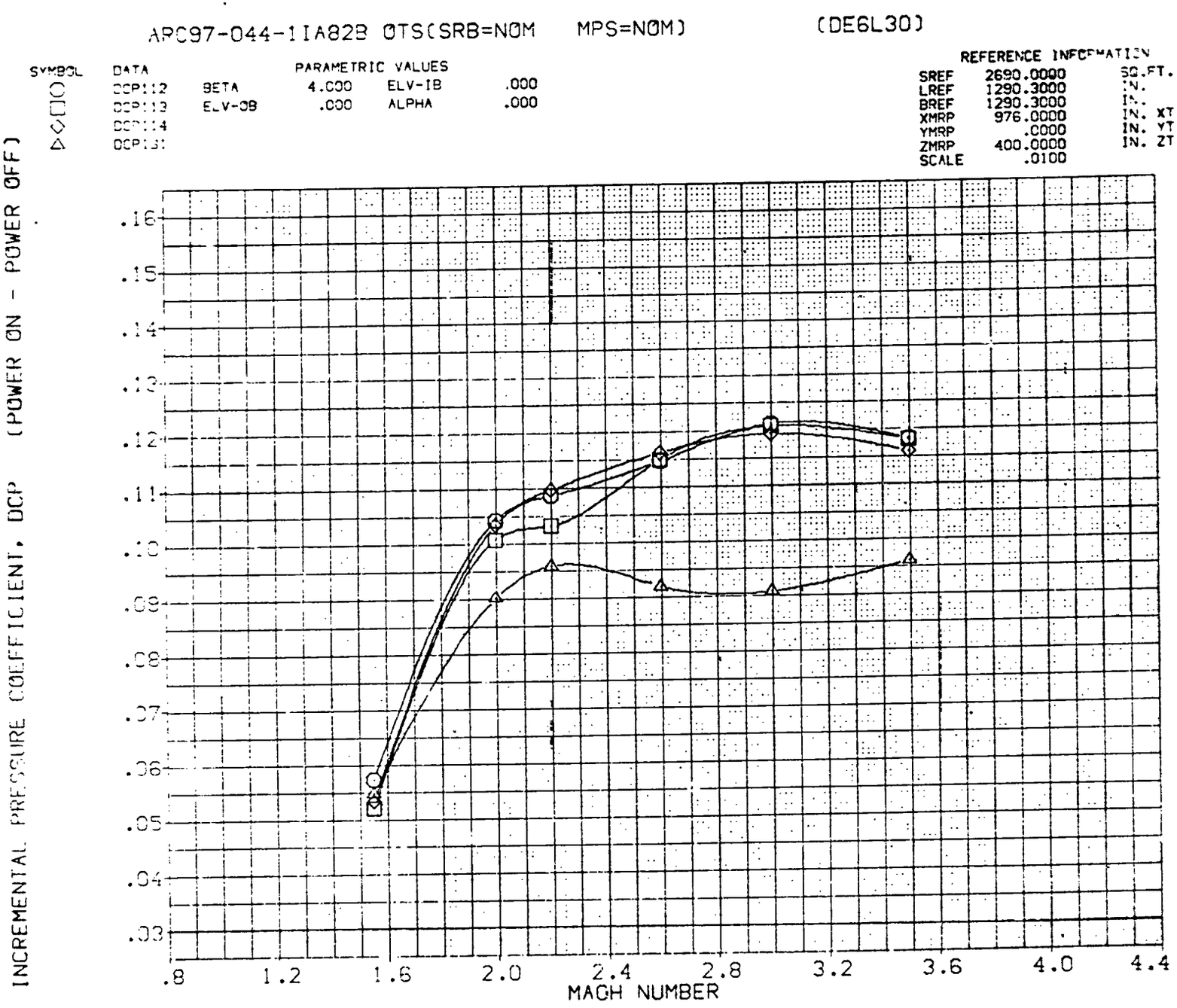


FIG. 84 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM

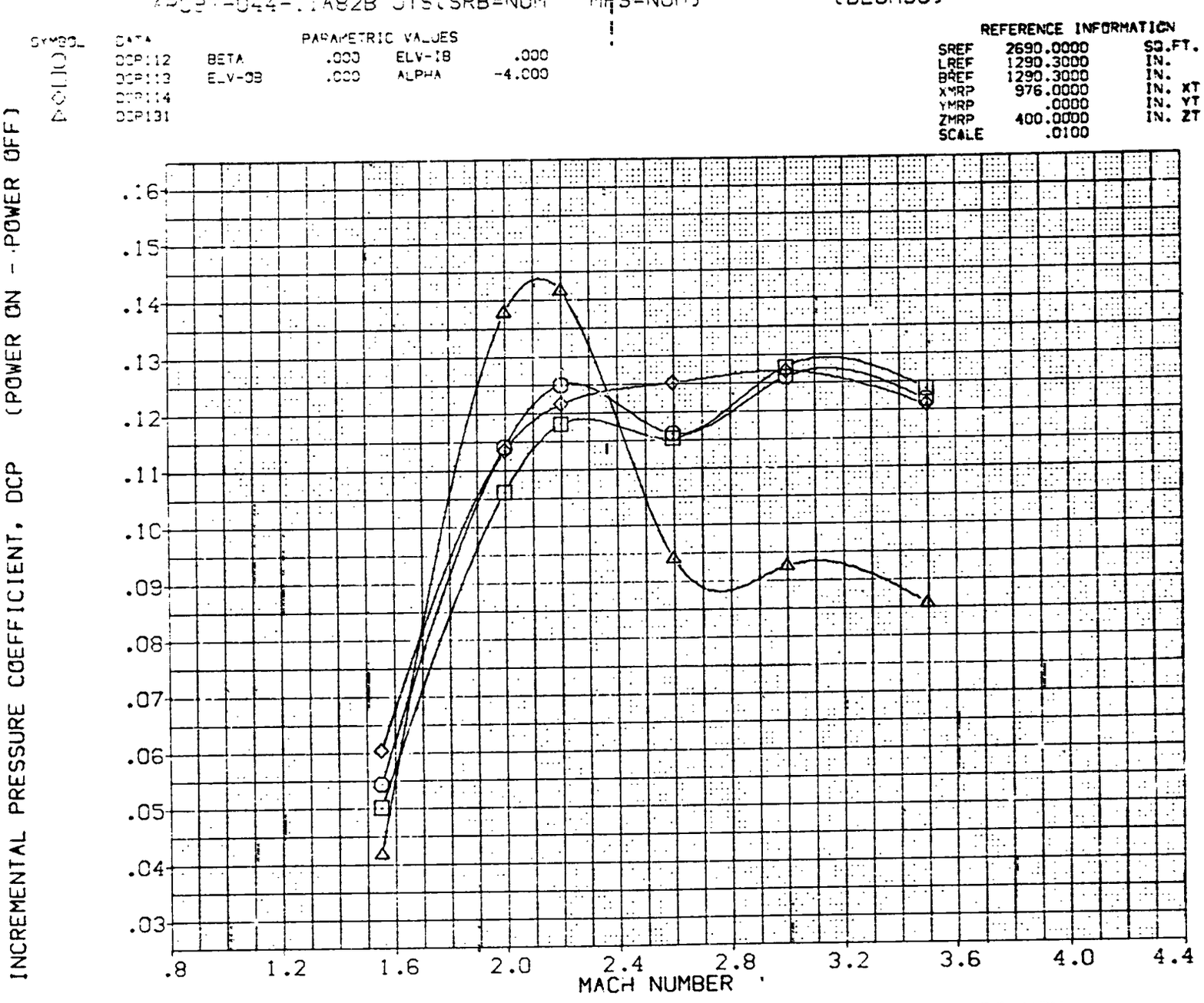


FIG. 84 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM

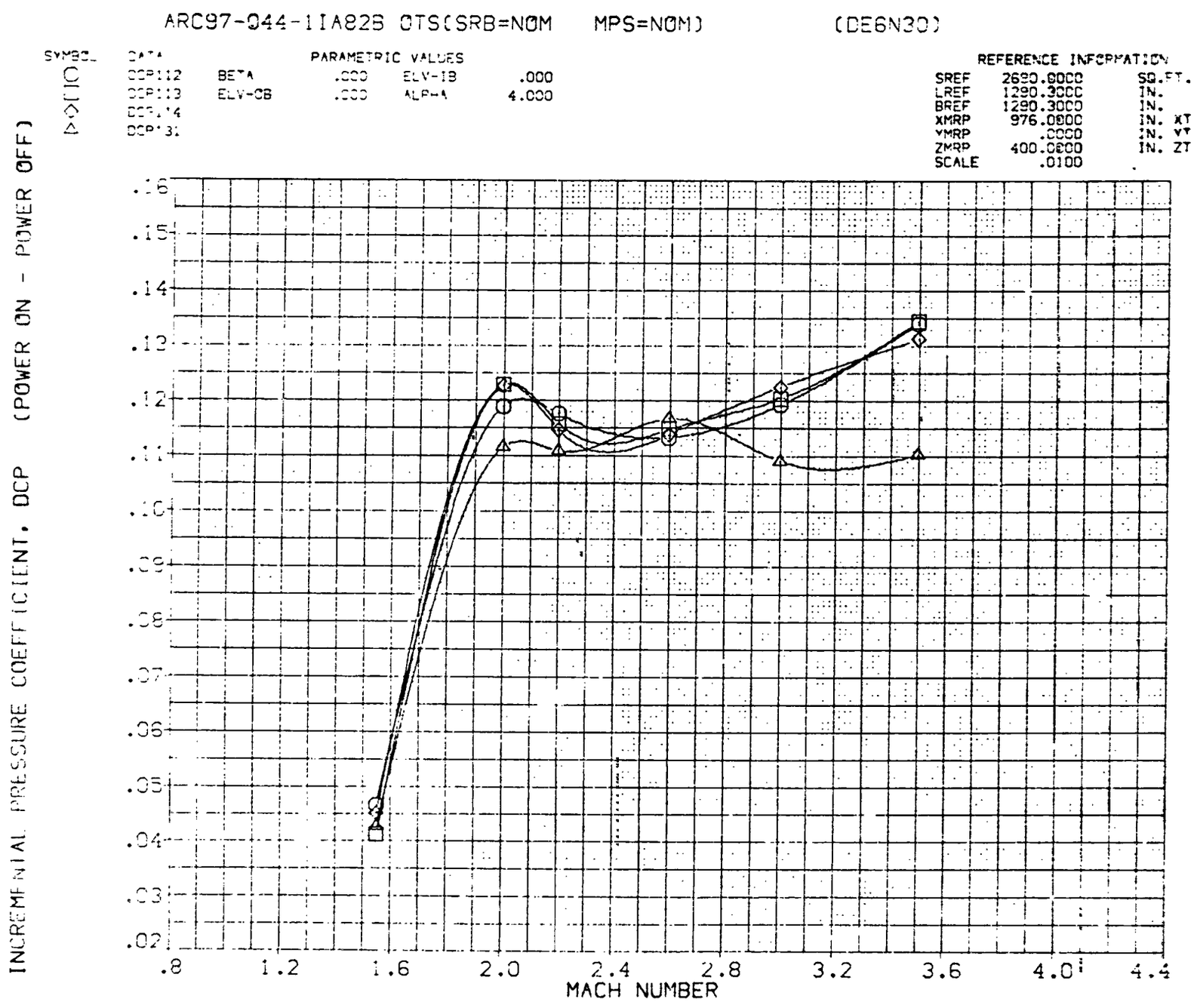


FIG. 84 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM

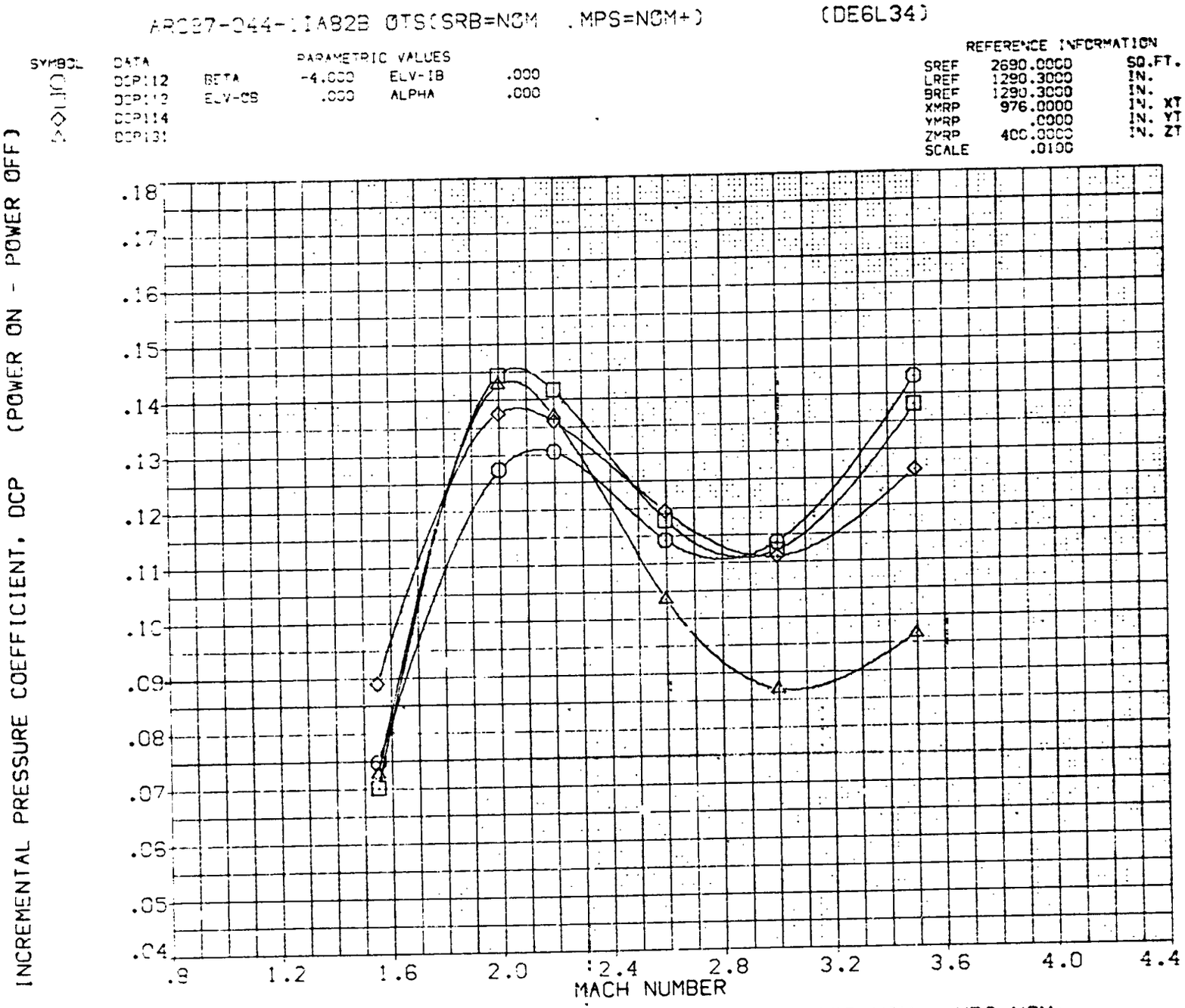


FIG. 85 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM+

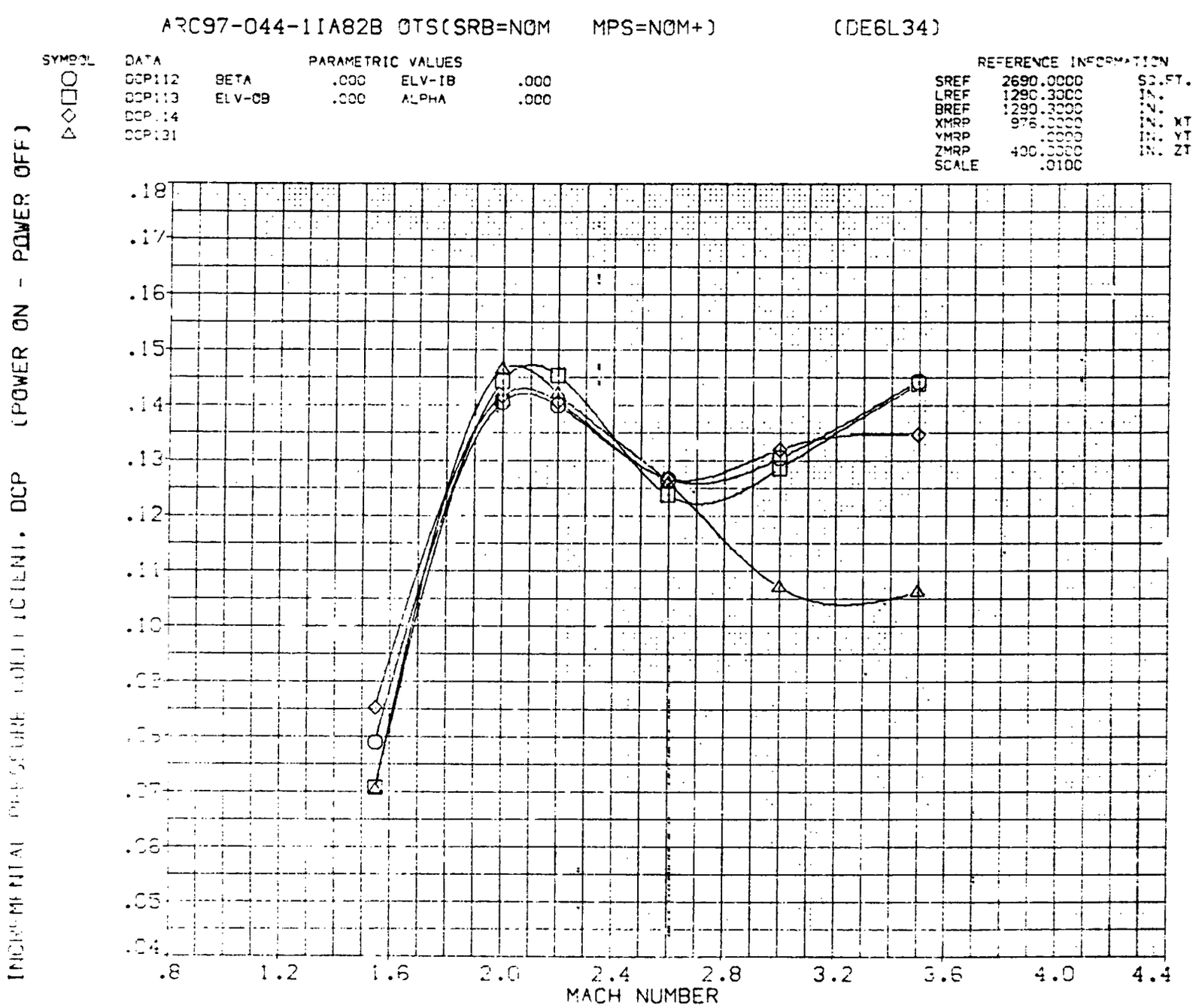


FIG. 85 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM+

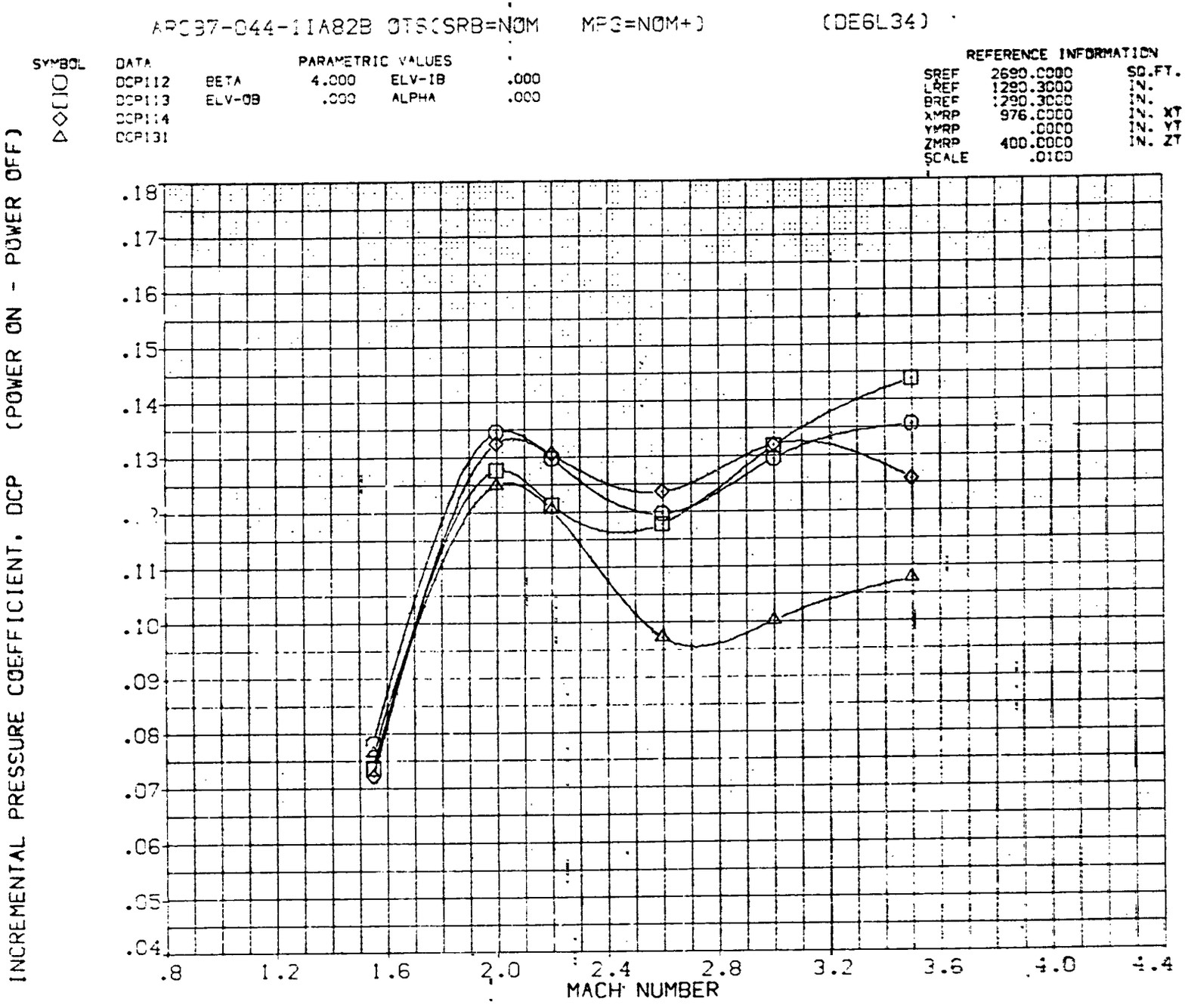


FIG. 85 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM+

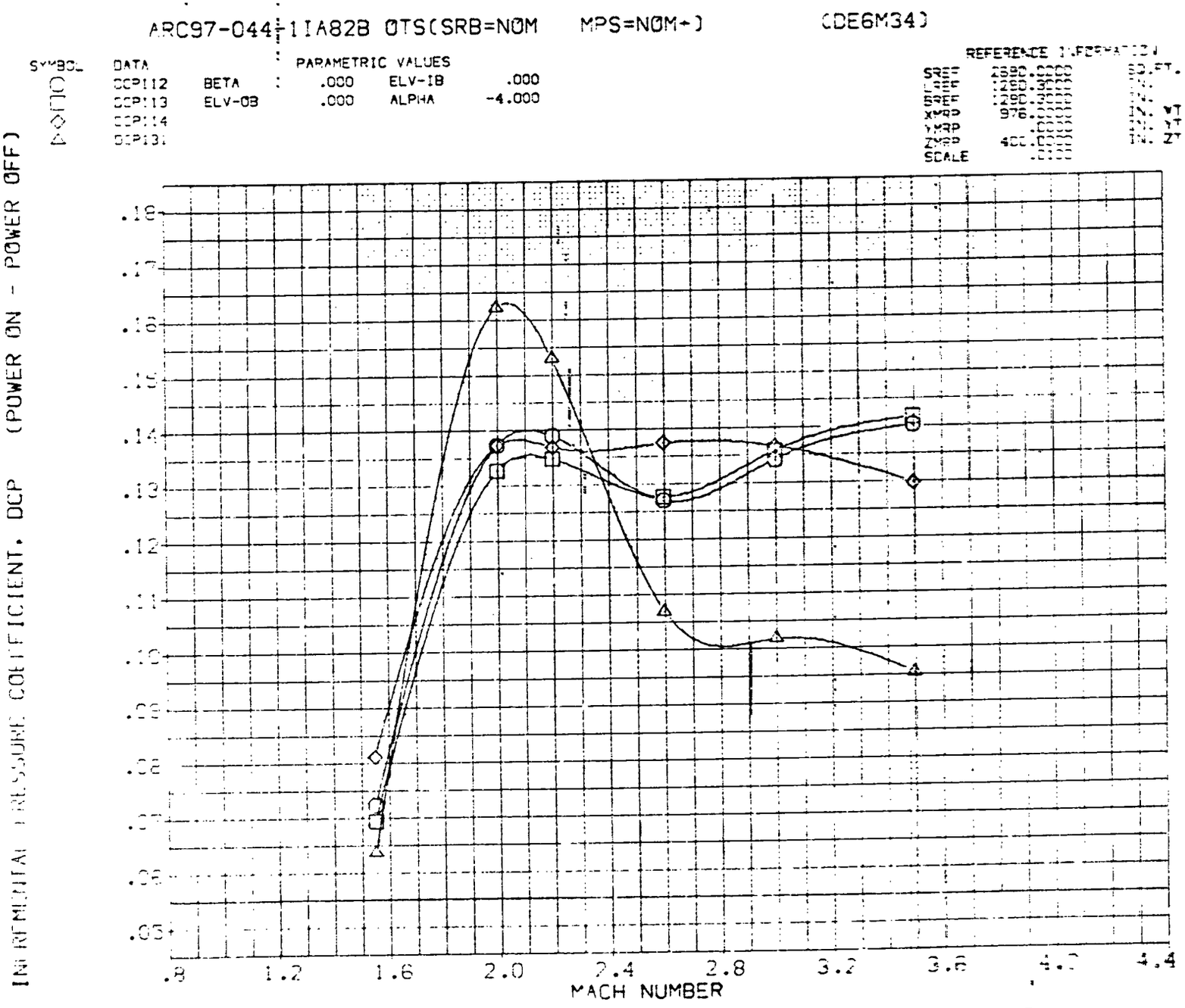


FIG. 85 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NØM. MPS=NØM+

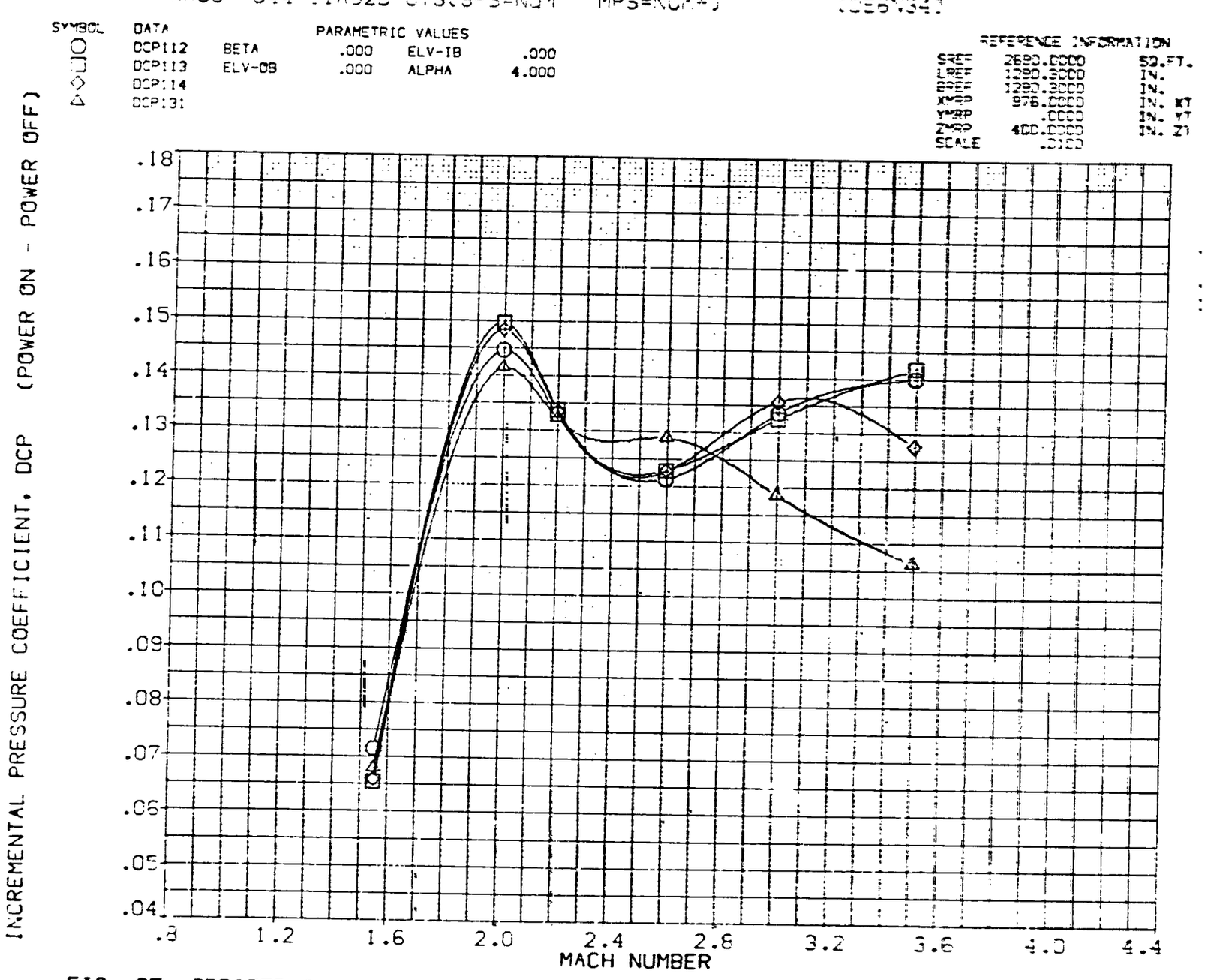


FIG. 85 ORBITER INCREMENTAL BASE PRESS. COEF.(TOP) SRB=NOM, MPS=NOM+

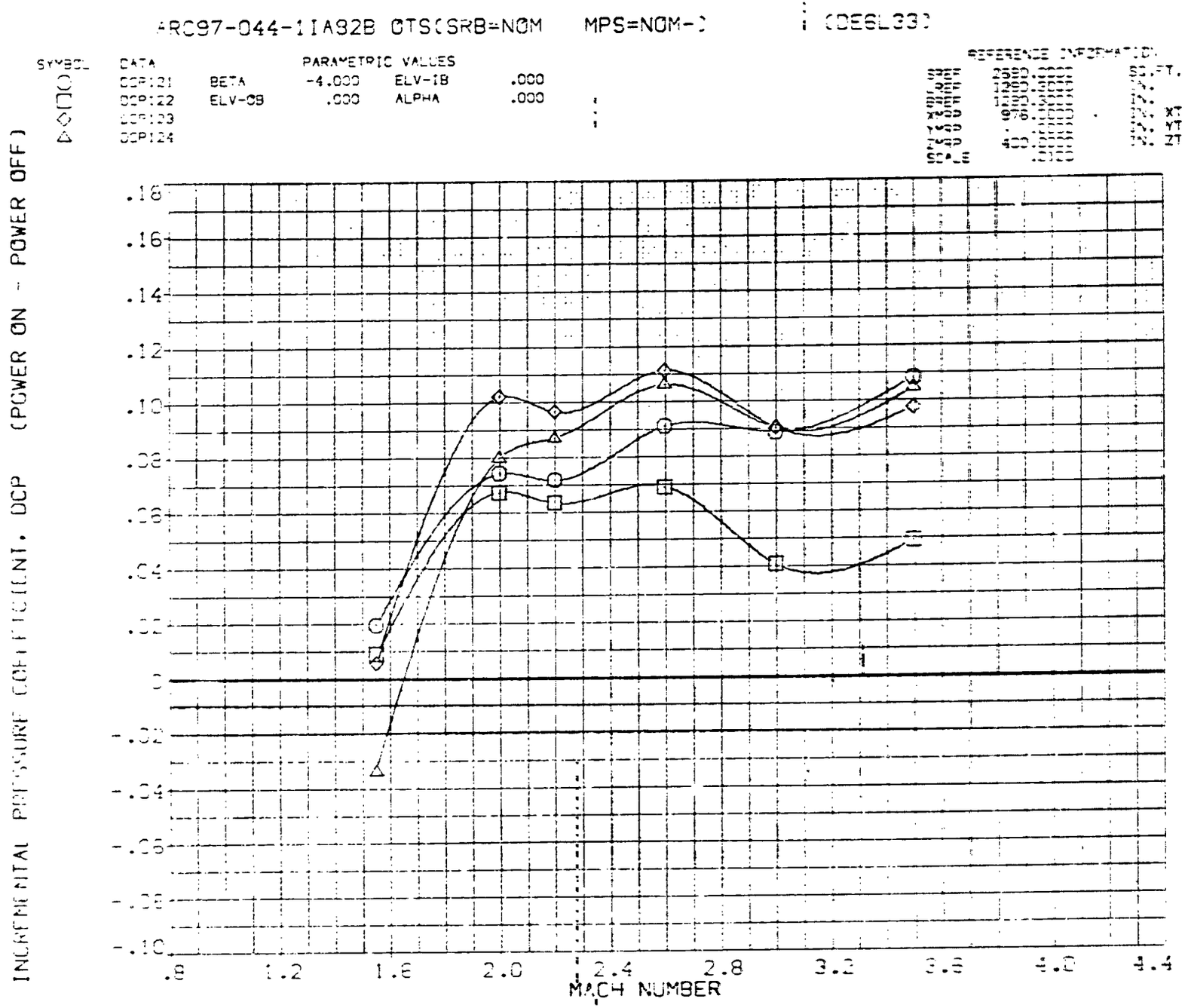


FIG. 86 CMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM. MPS=NOM-

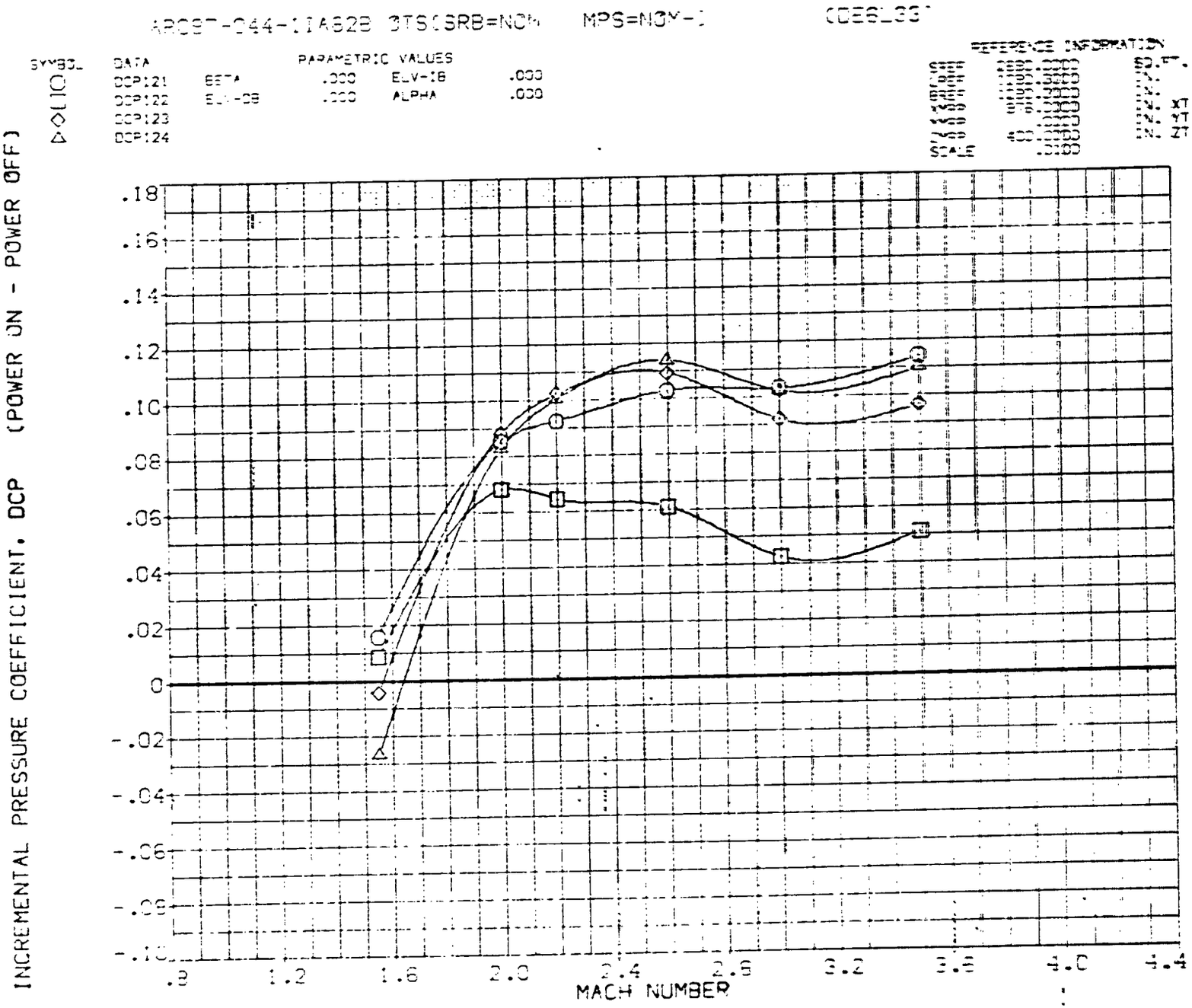


FIG. 86 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM-

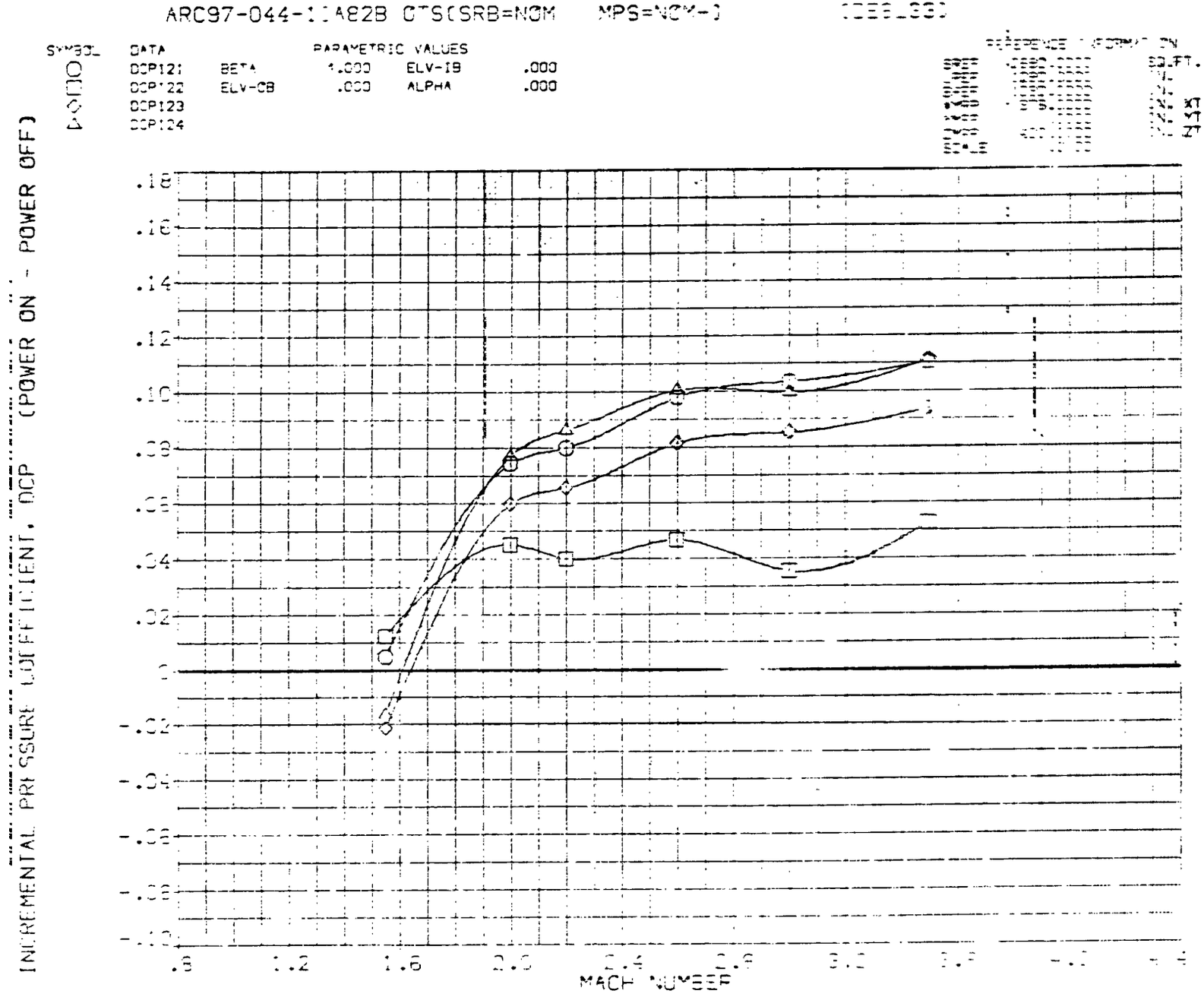


FIG. 96 OMS INCREMENTAL BASE PRESSURE COEF. MPS=NOM.

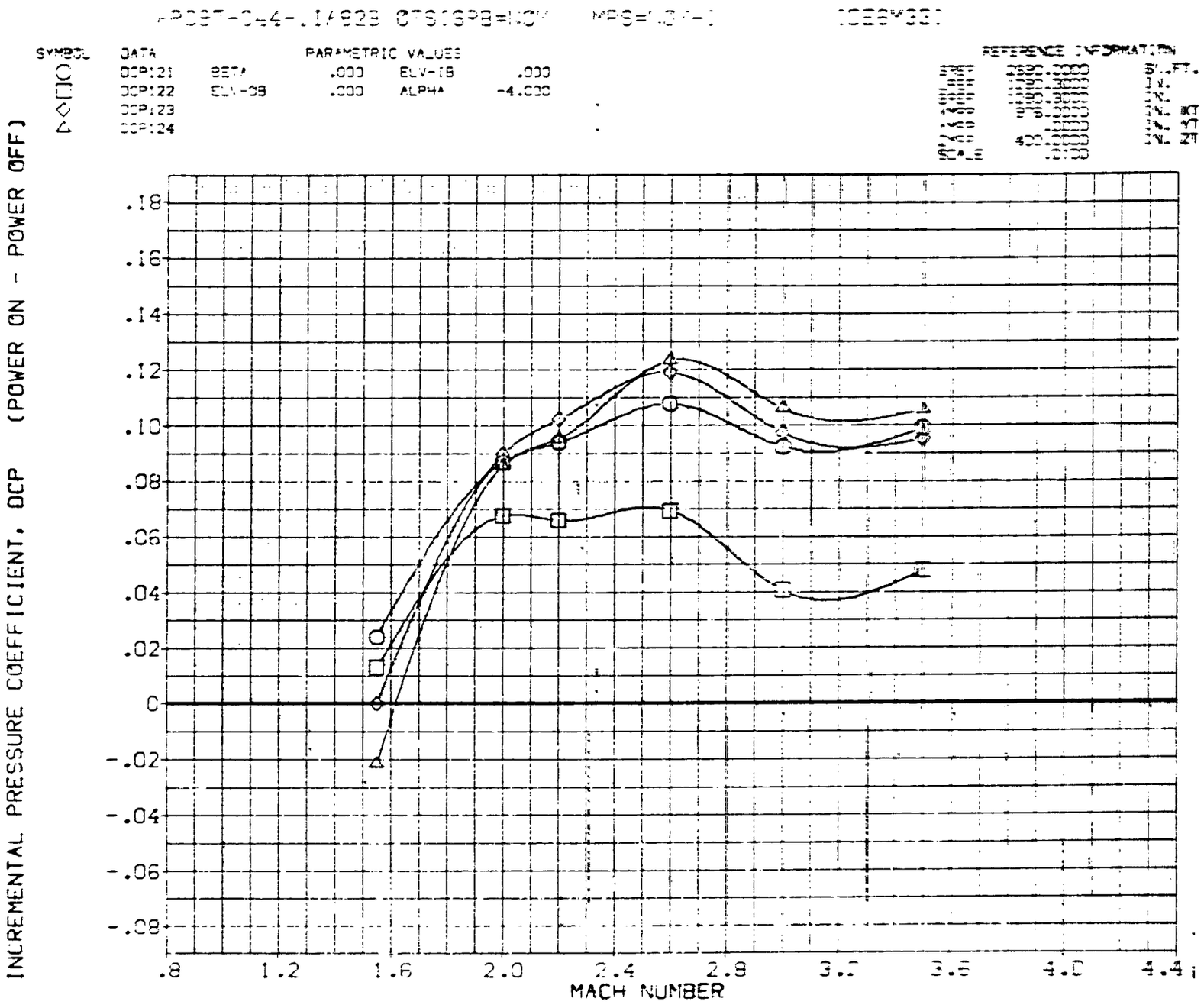


FIG. 86 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM. MPS=NOM.

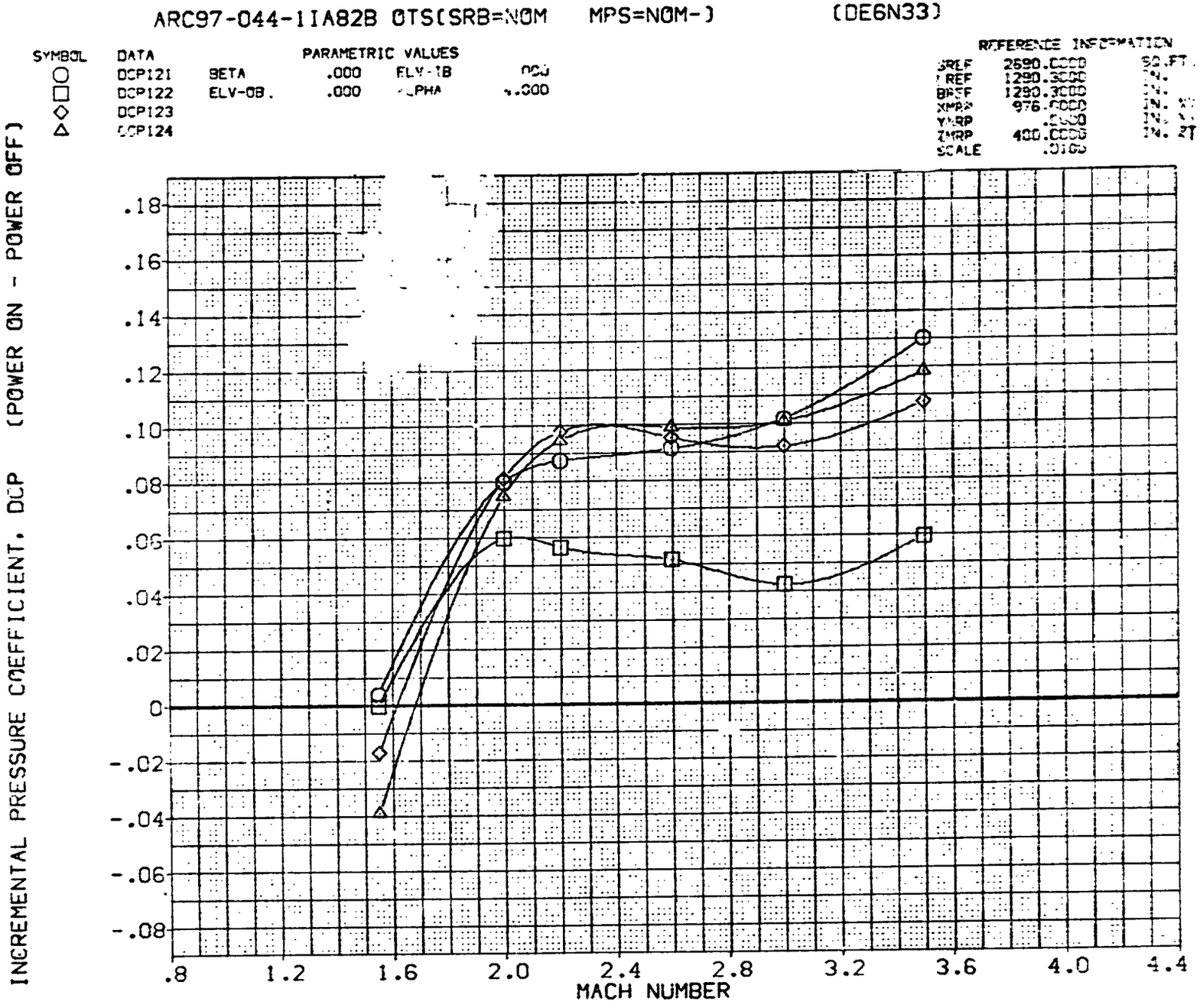


FIG. 86 0MS INCREMENTAL BA3E PRESSURE C0EF. SRB=N0M. MPS=N0M-

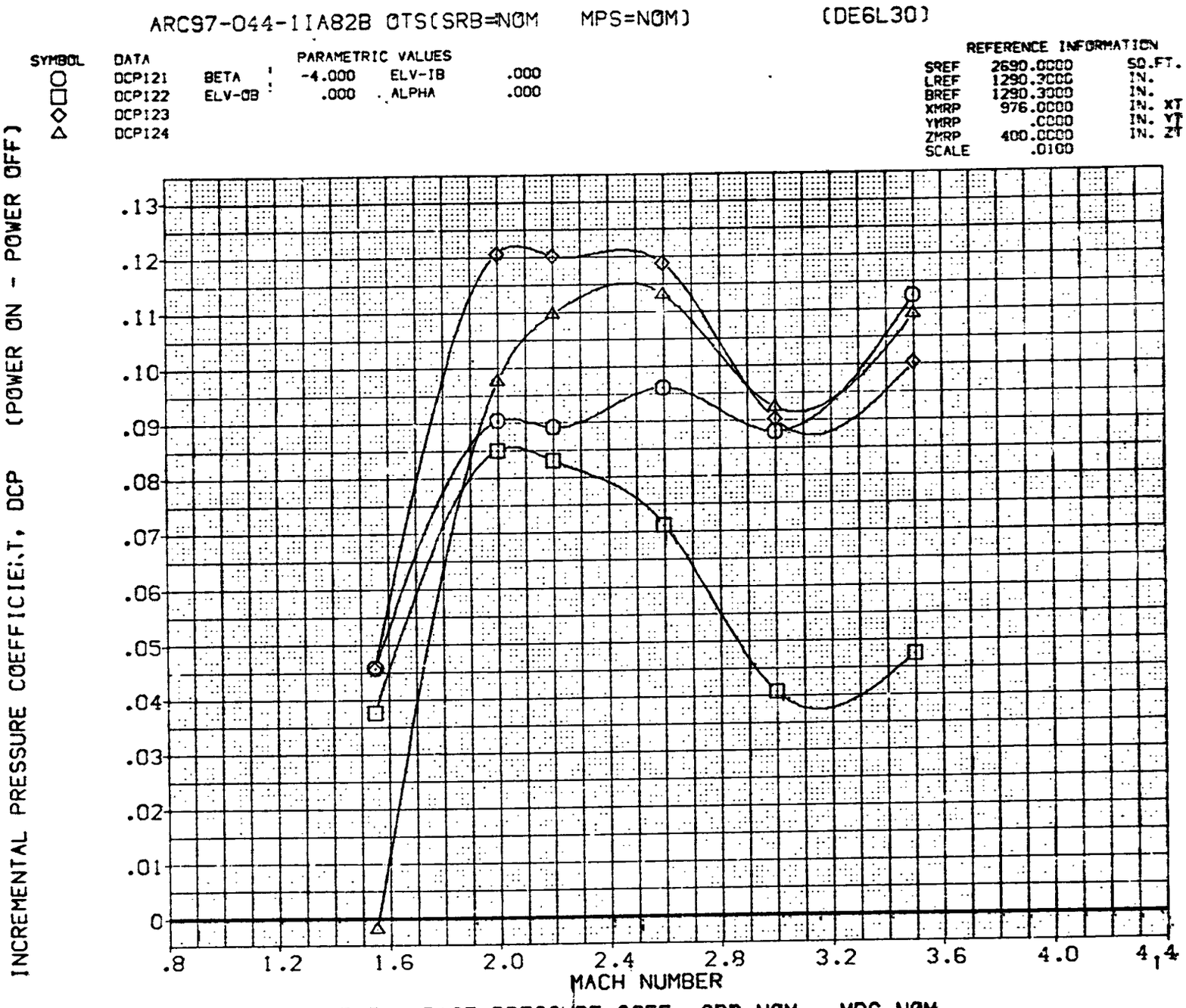


FIG. 87 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM

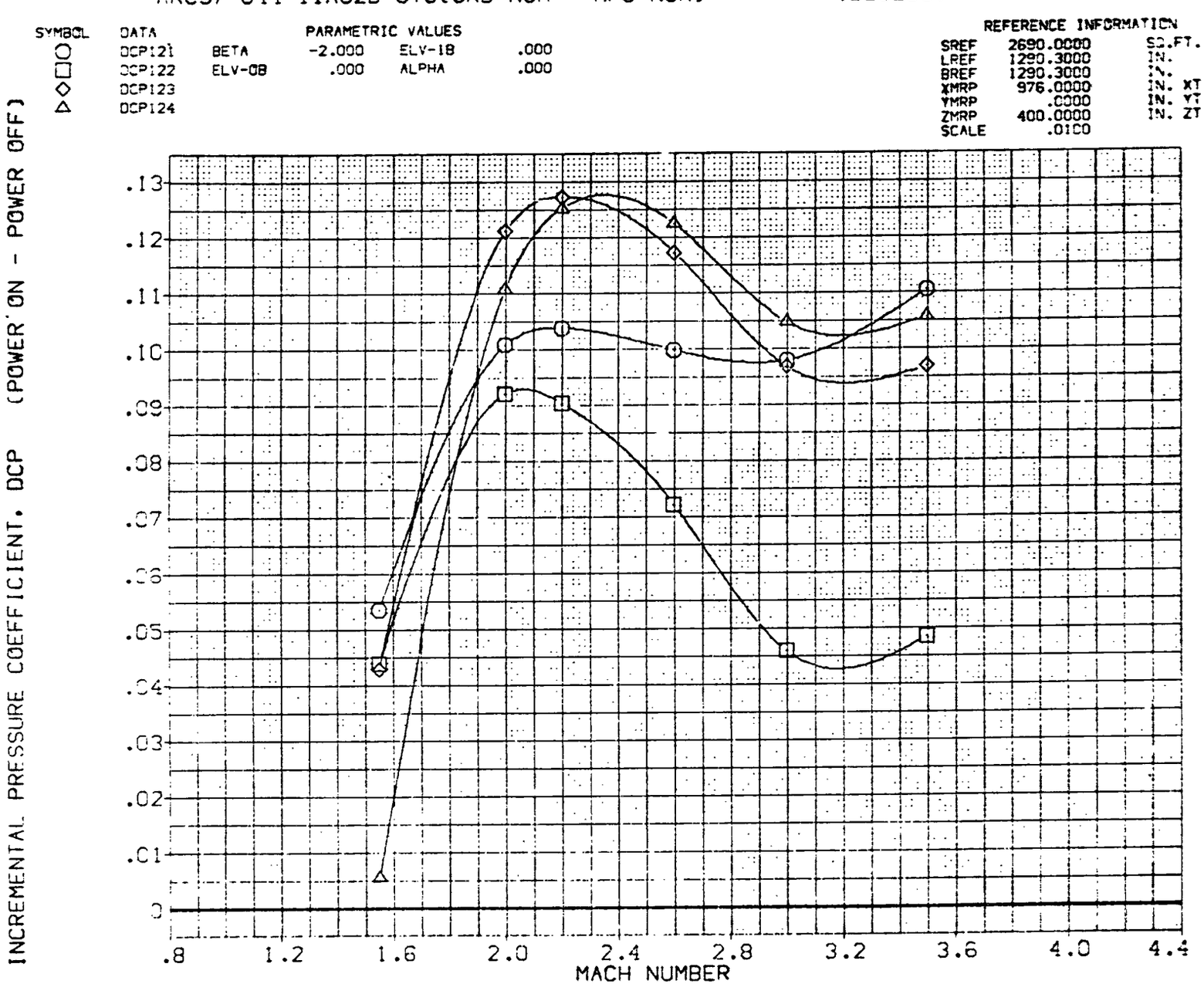


FIG. 87 0MS INCREMENTAL BASE PRESSURE C0EF. SRB=N0M, MPS=N0M

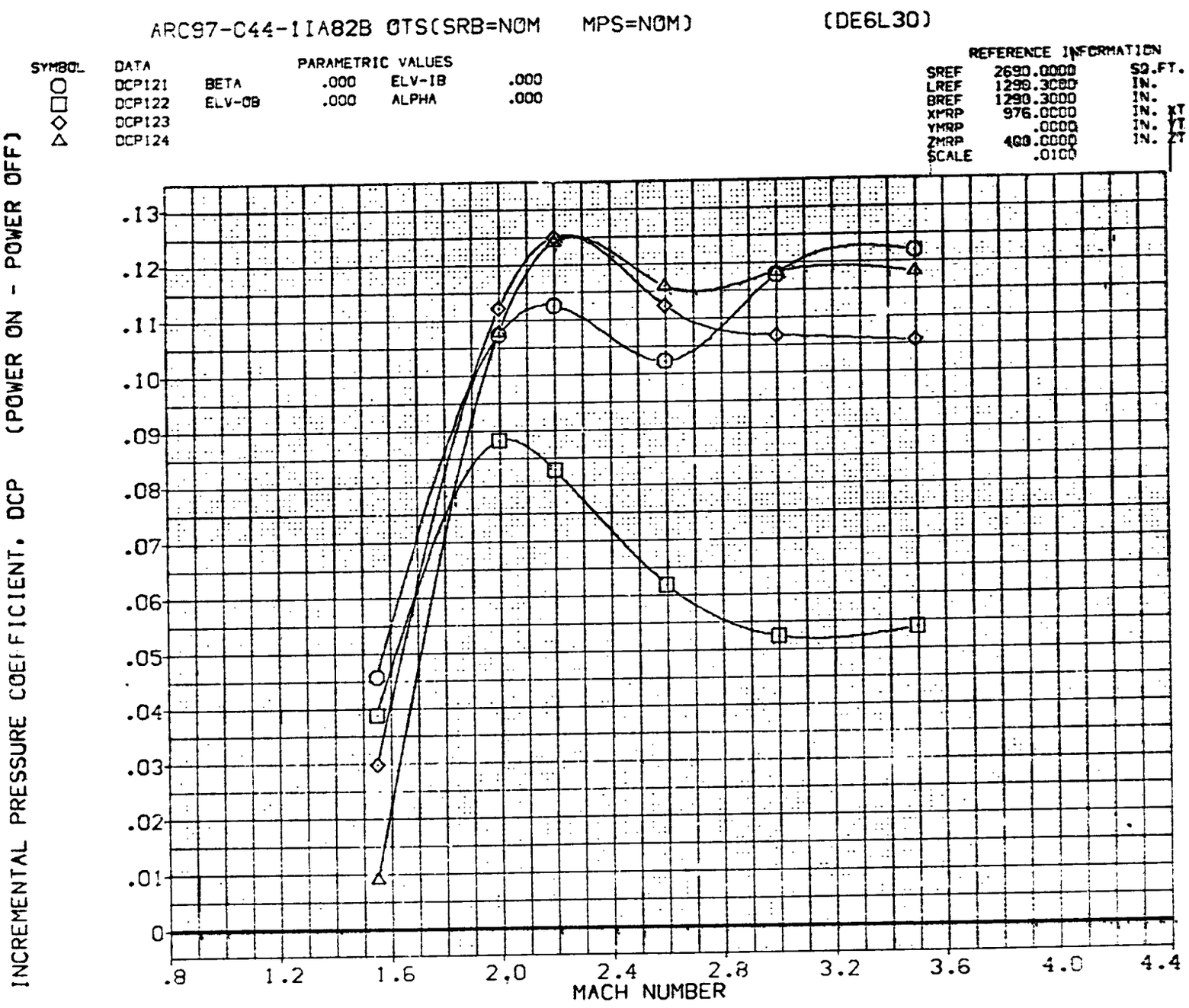


FIG. 87 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM

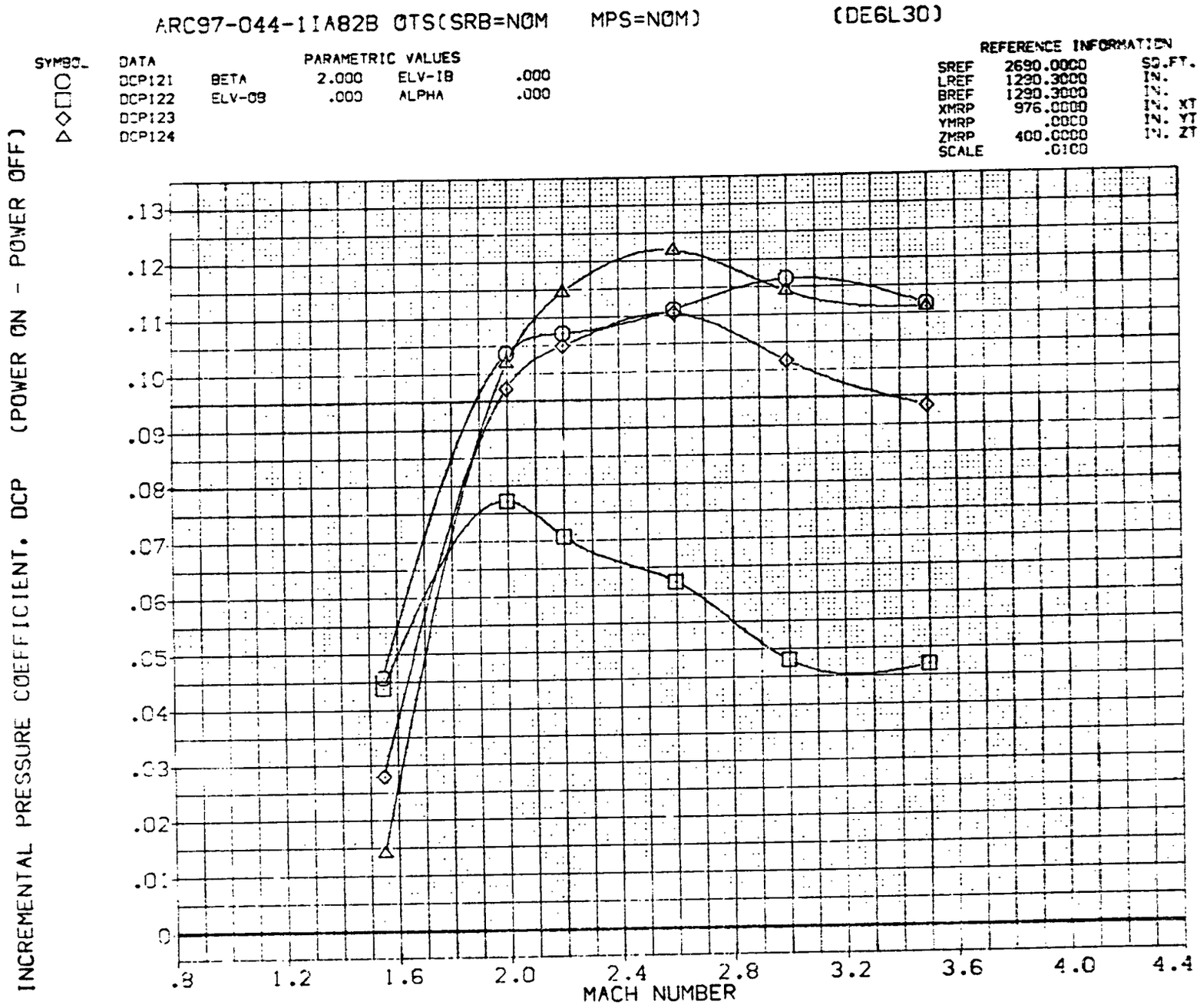


FIG. 87 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM

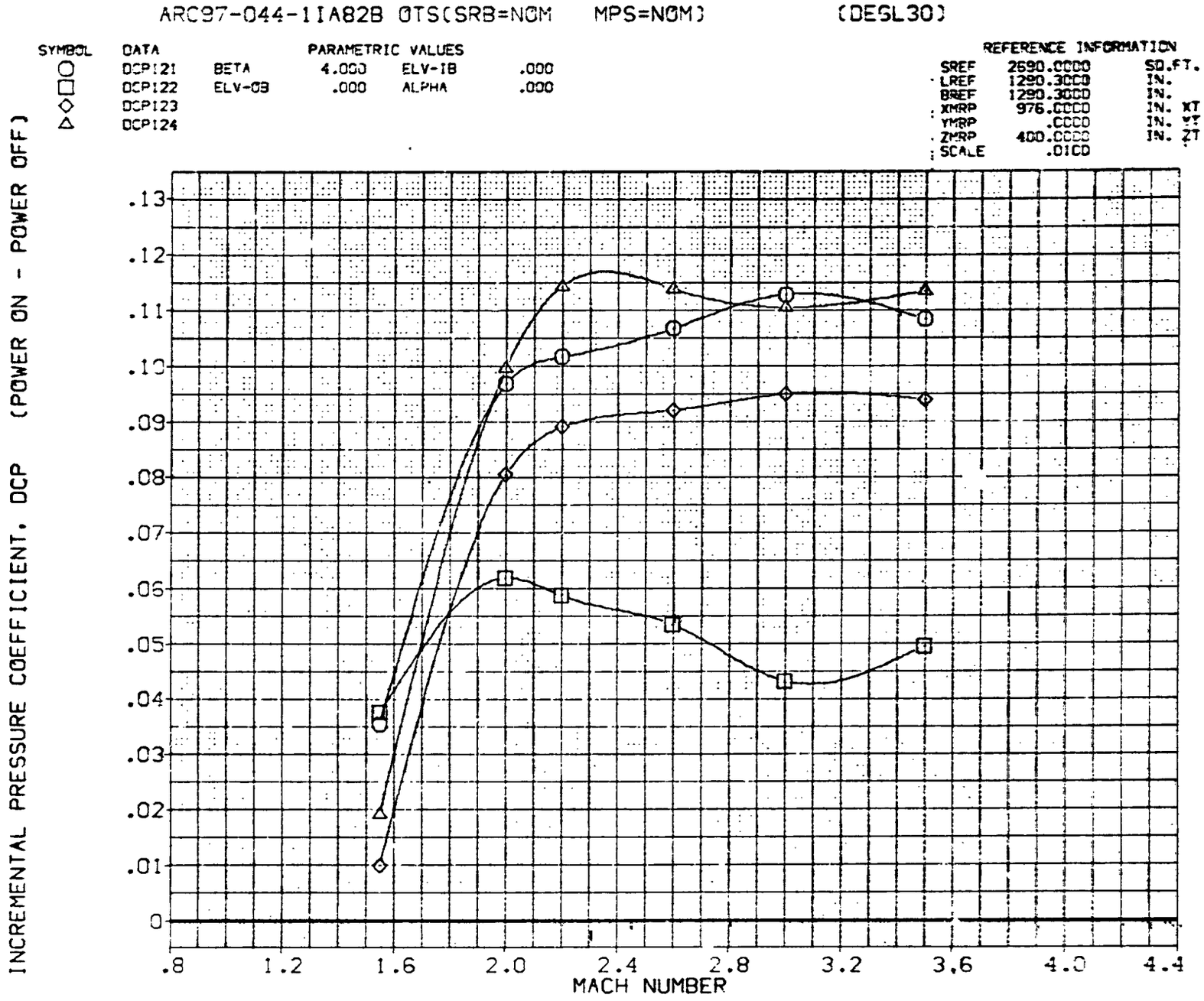


FIG. 87 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM

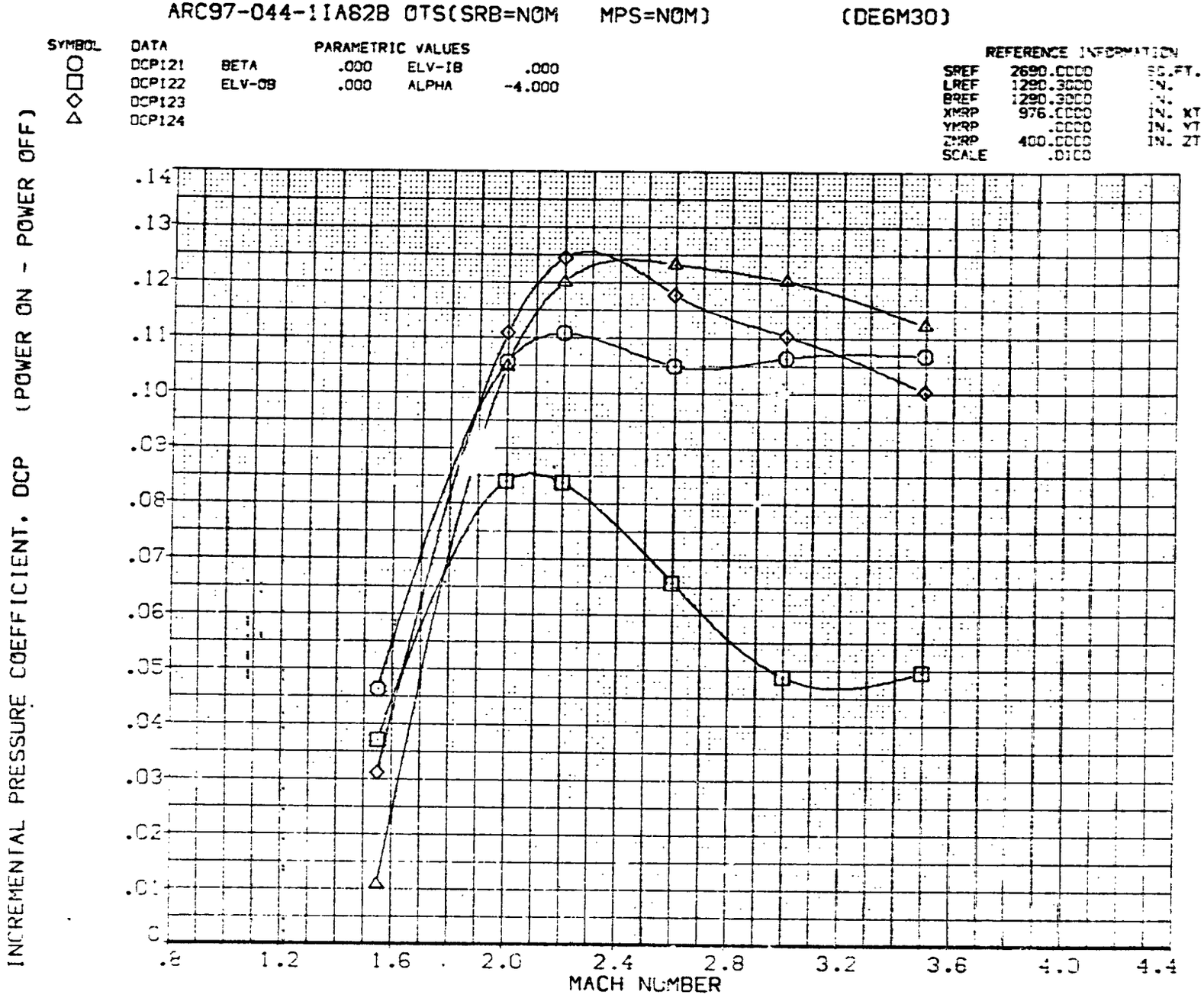


FIG. 87 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM

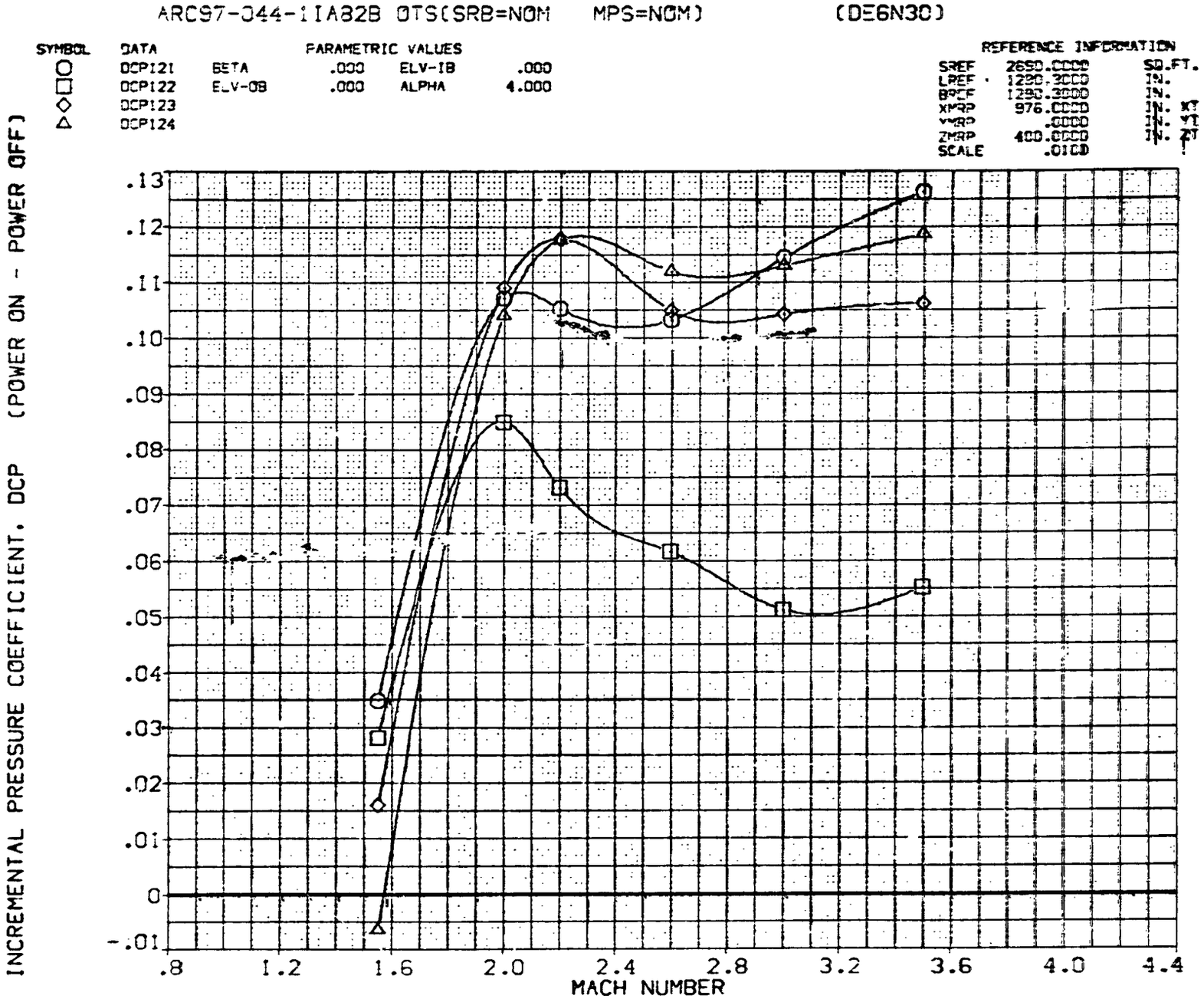


FIG. 87 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM

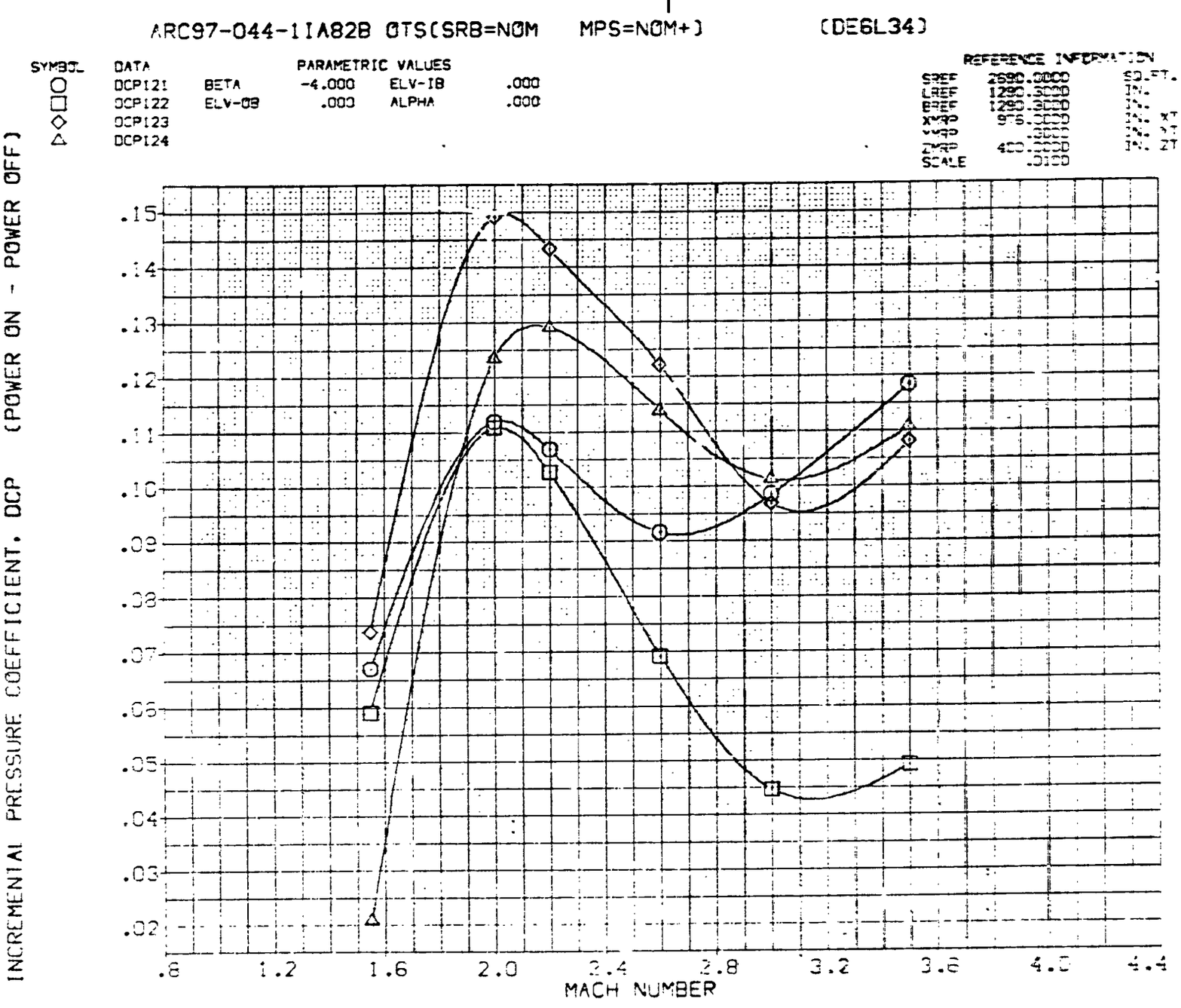


FIG. 88 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM+

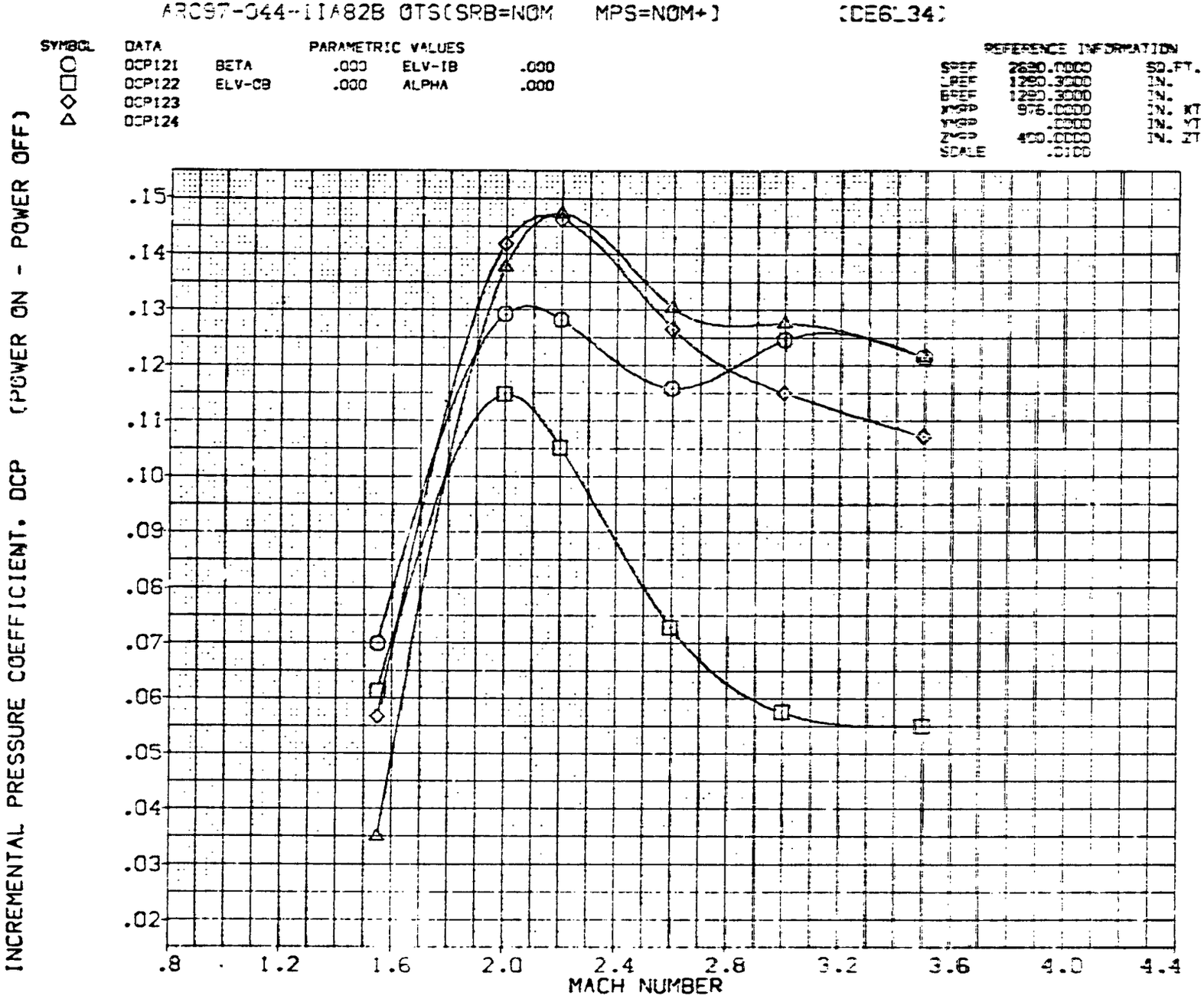


FIG. 88 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM+

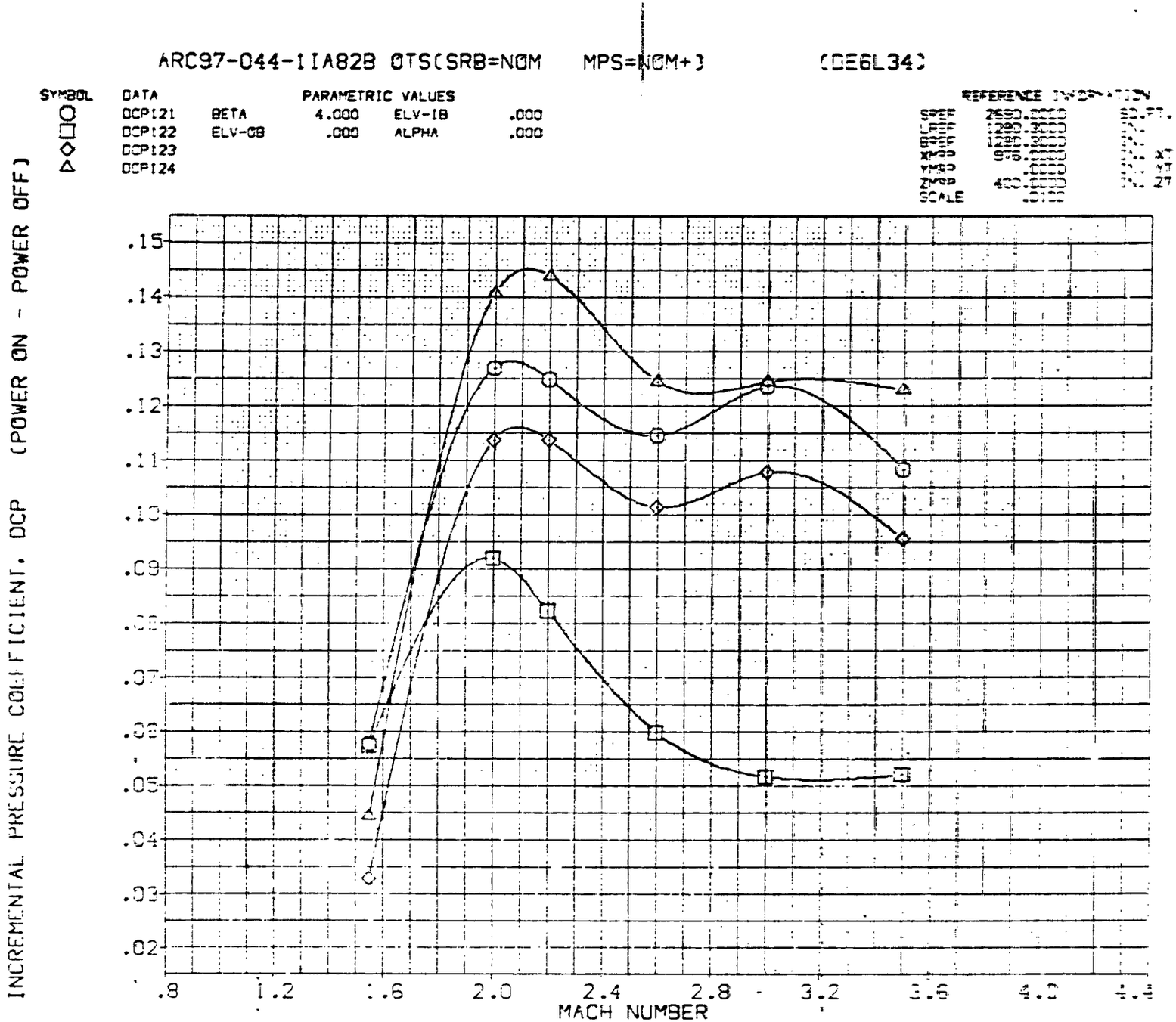


FIG. 88 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM+

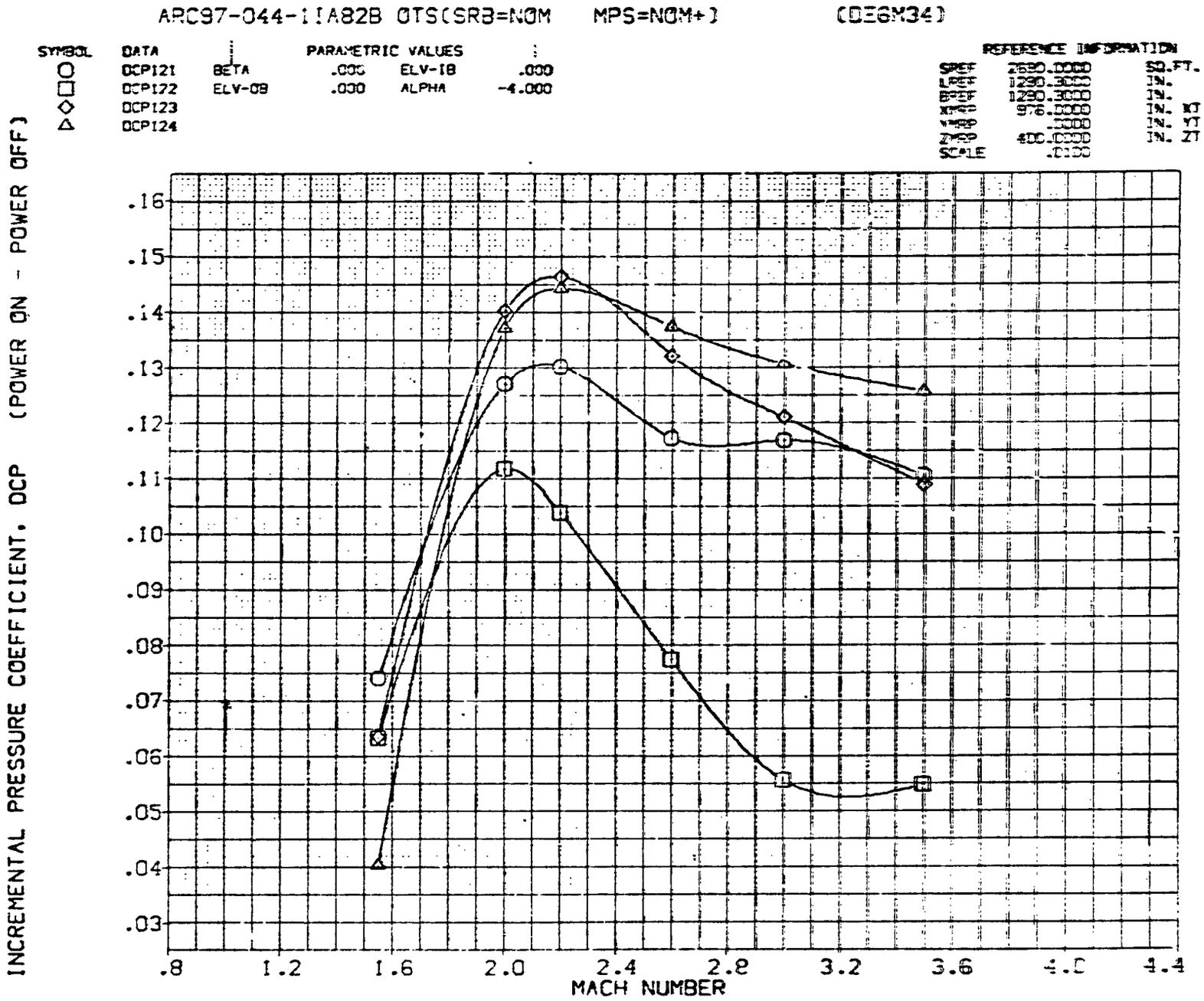


FIG. 88 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM+

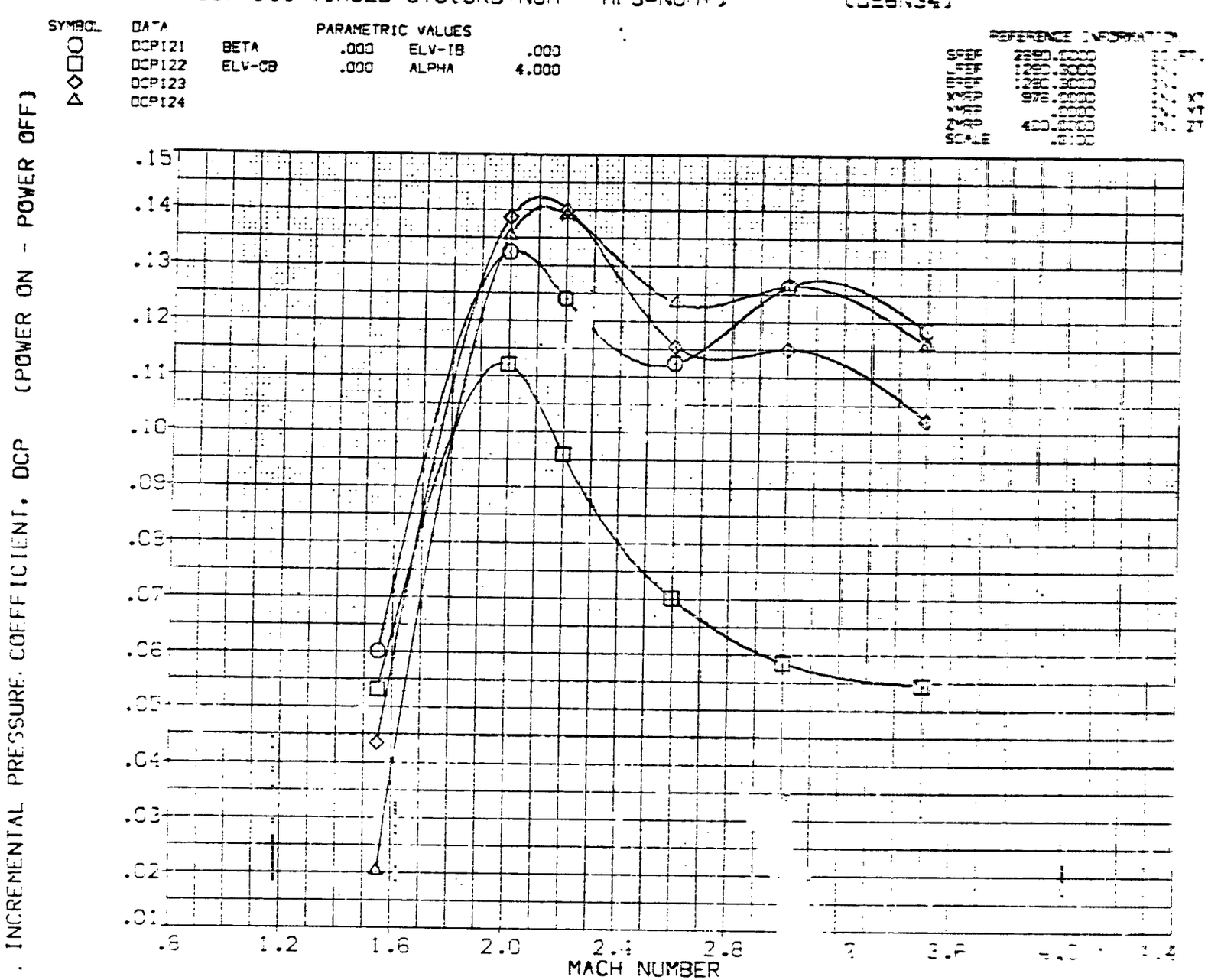


FIG. 88 OMS INCREMENTAL BASE PRESSURE COEF. SRB=NOM, MPS=NOM+

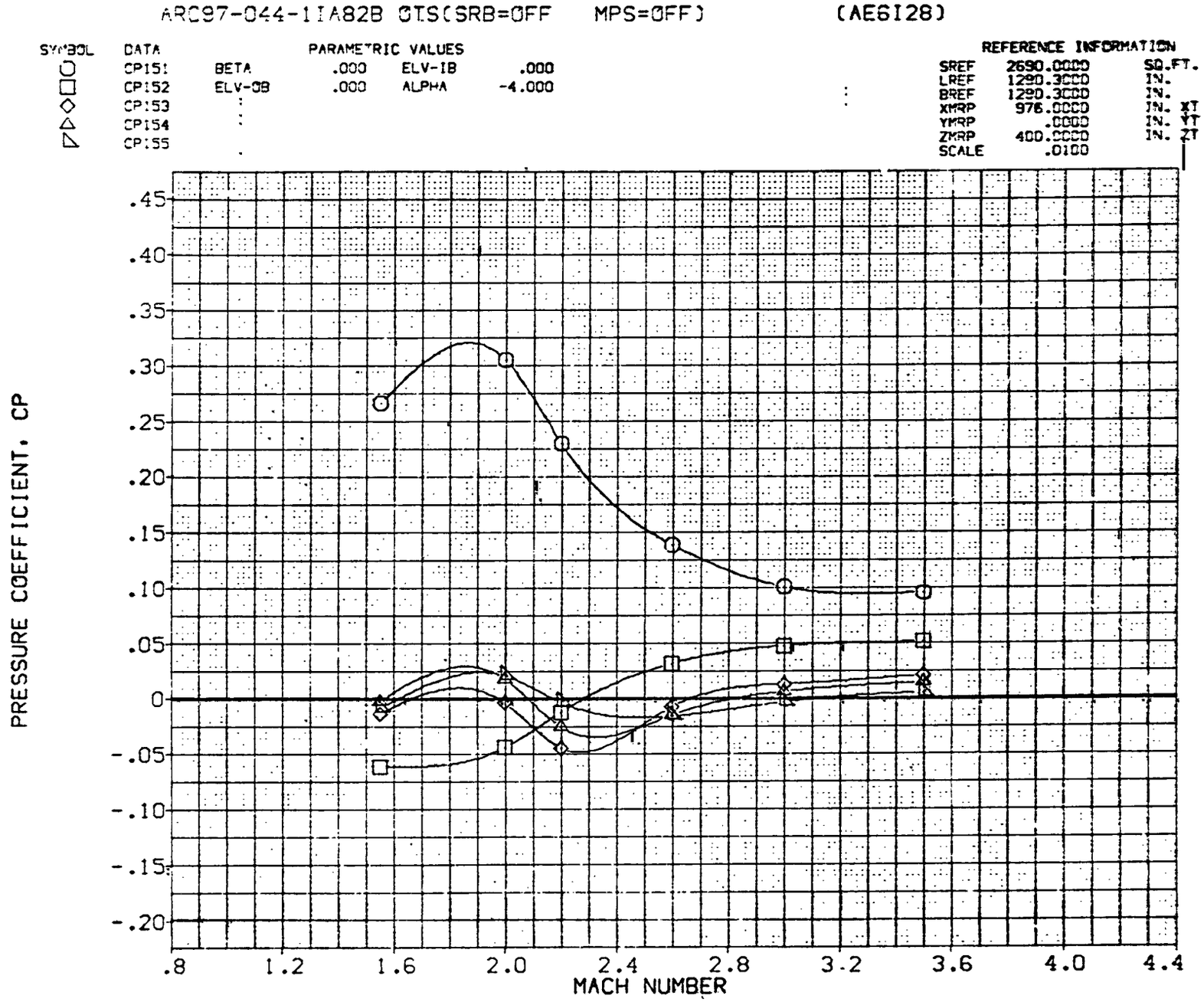


FIG. 89 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

ARC97-044-1IA82B 0TS(SRB=0FF MPS=0FF) (AE6J28)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP151	BETA	-4.000	ELV-IB	.000
□	CP152	ELV-0B	.000	ALPHA	.000
◇	CP153				
△	CP154				
▽	CP155				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

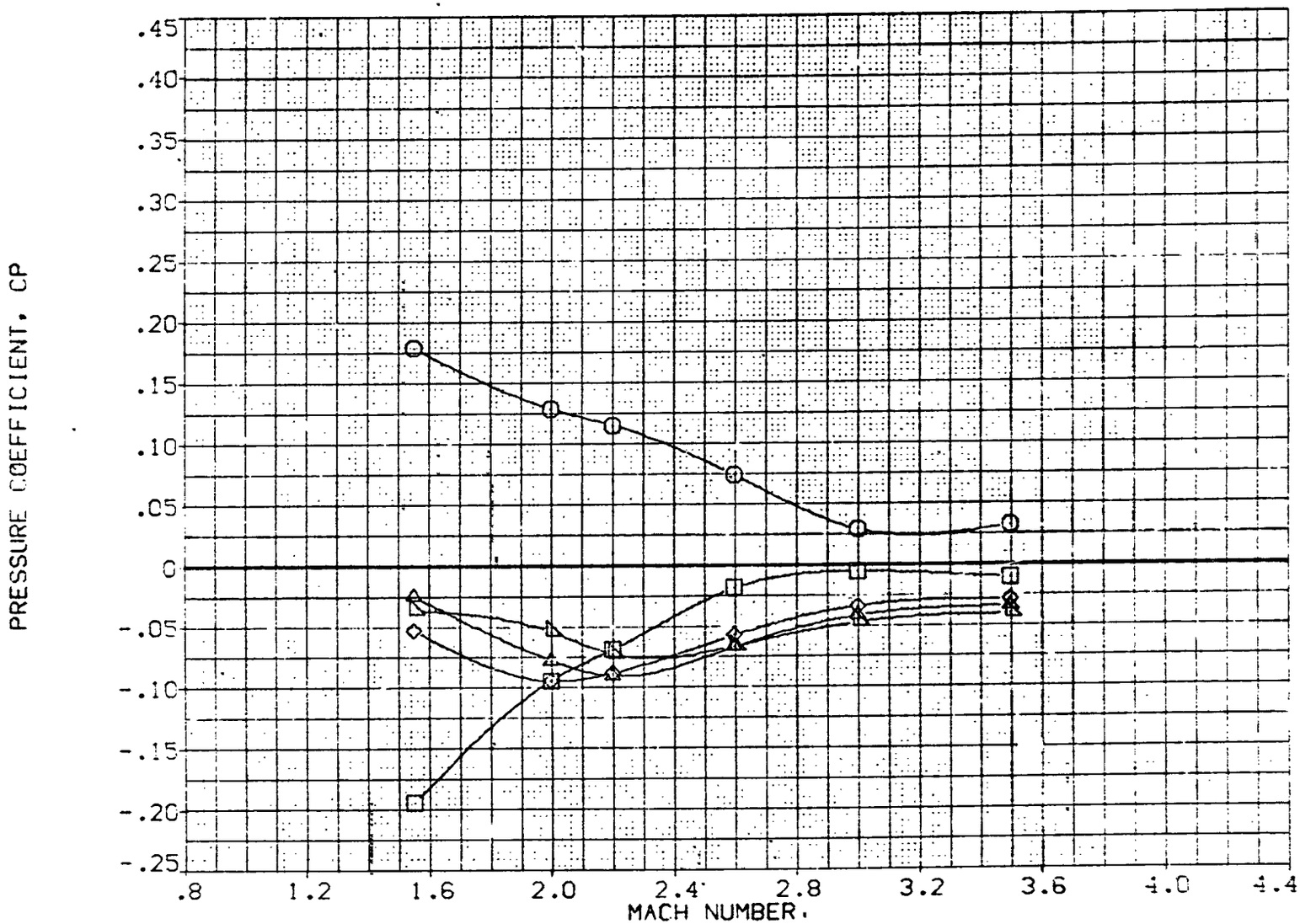


FIG. 89 0RBITER PRESSURE C0EFFICIENTS(RIGHT) SRB=0FF, MPS=0FF.

ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF) (AE6J28)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP151	BETA	-2.000	ELV-IB	.000
□	CP152	ELV-OB	.000	ALPHA	.000
◇	CP153				
△	CP154				
▱	CP155				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

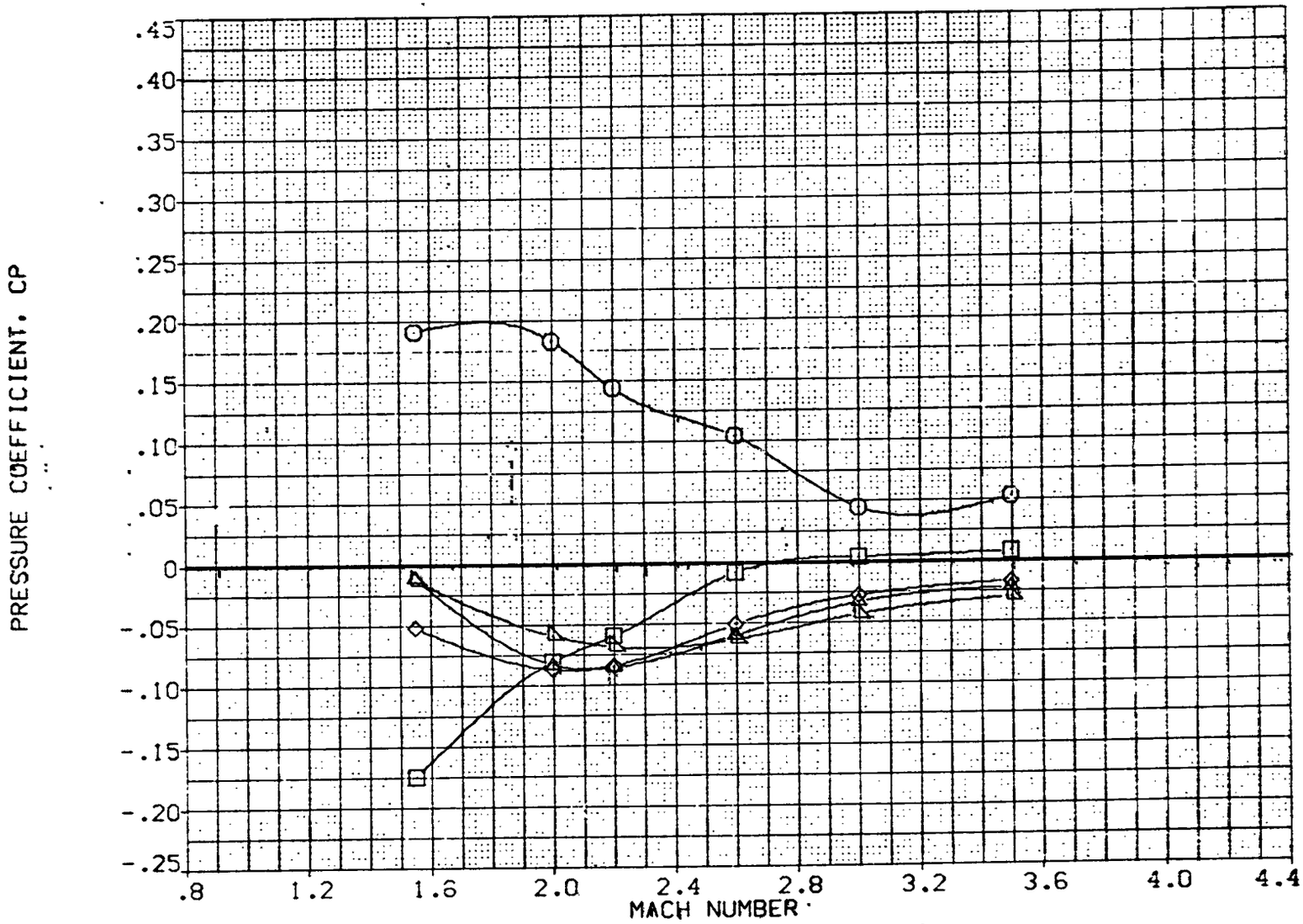


FIG. 89 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

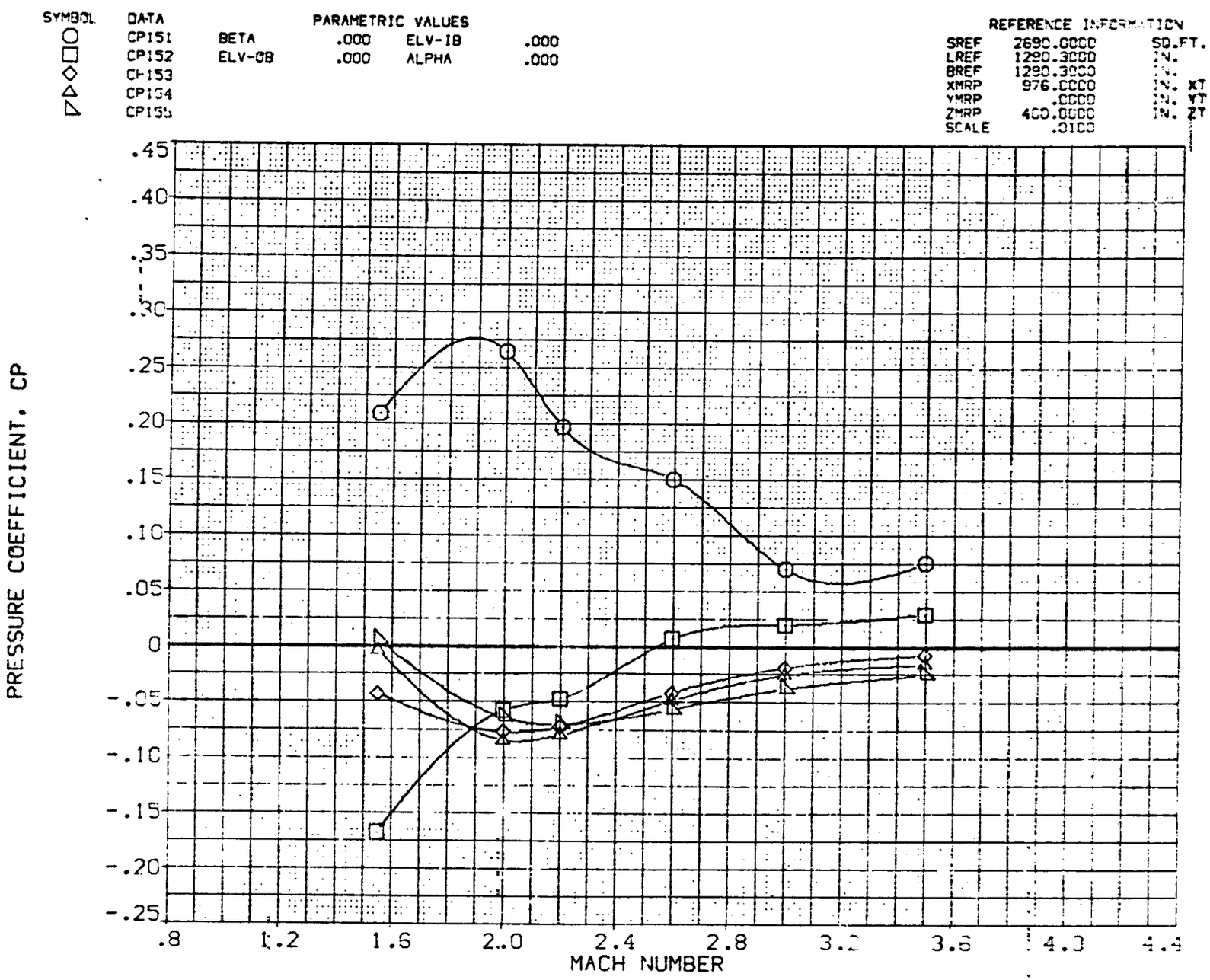


FIG. 89 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF) (AE6J28)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP151	BETA	2.000	ELV-IB	.000
□	CP152	ELV-OB	.000	ALPHA	.000
◇	CP153				
△	CP154				
▽	CP155				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

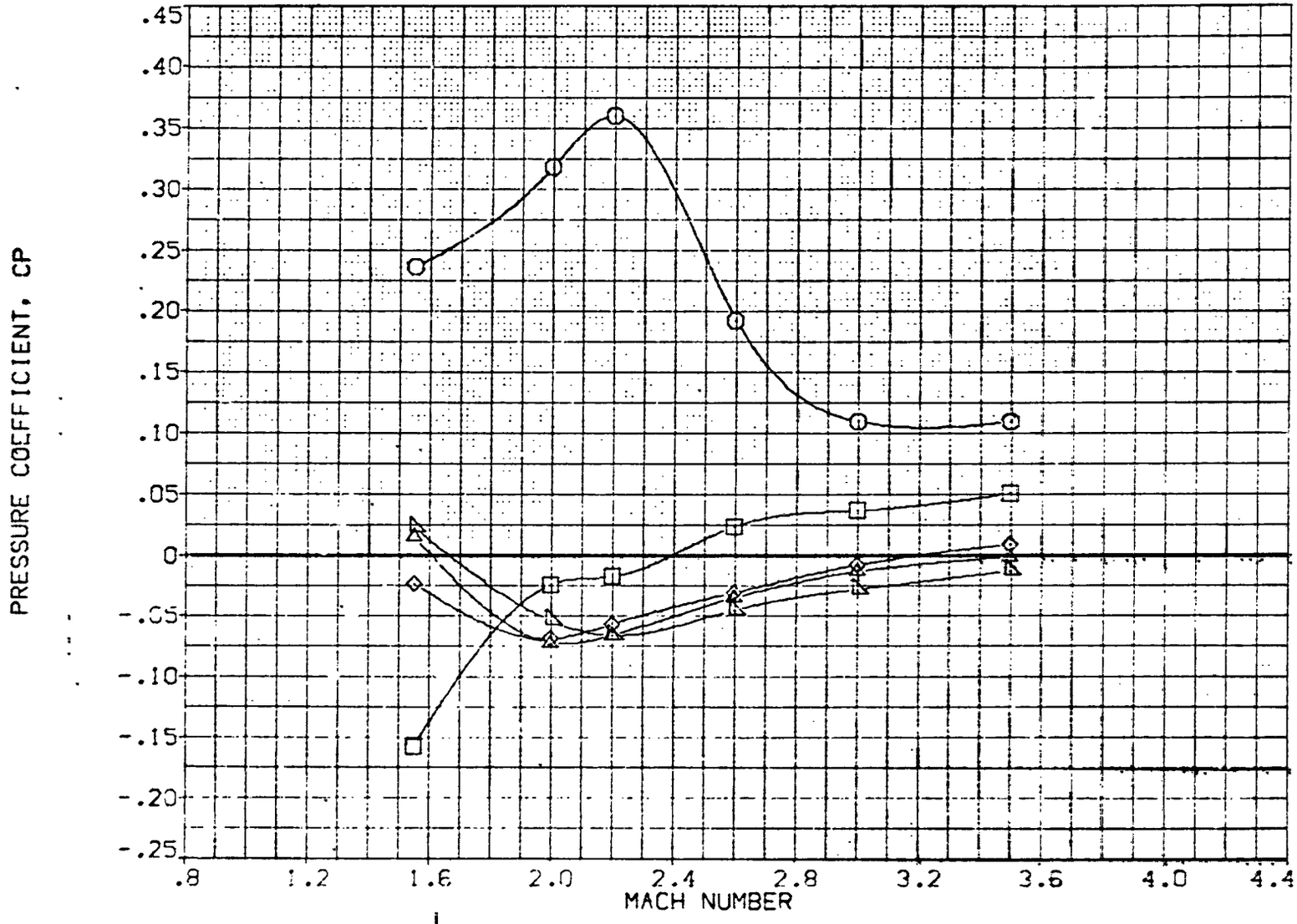


FIG. 89 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

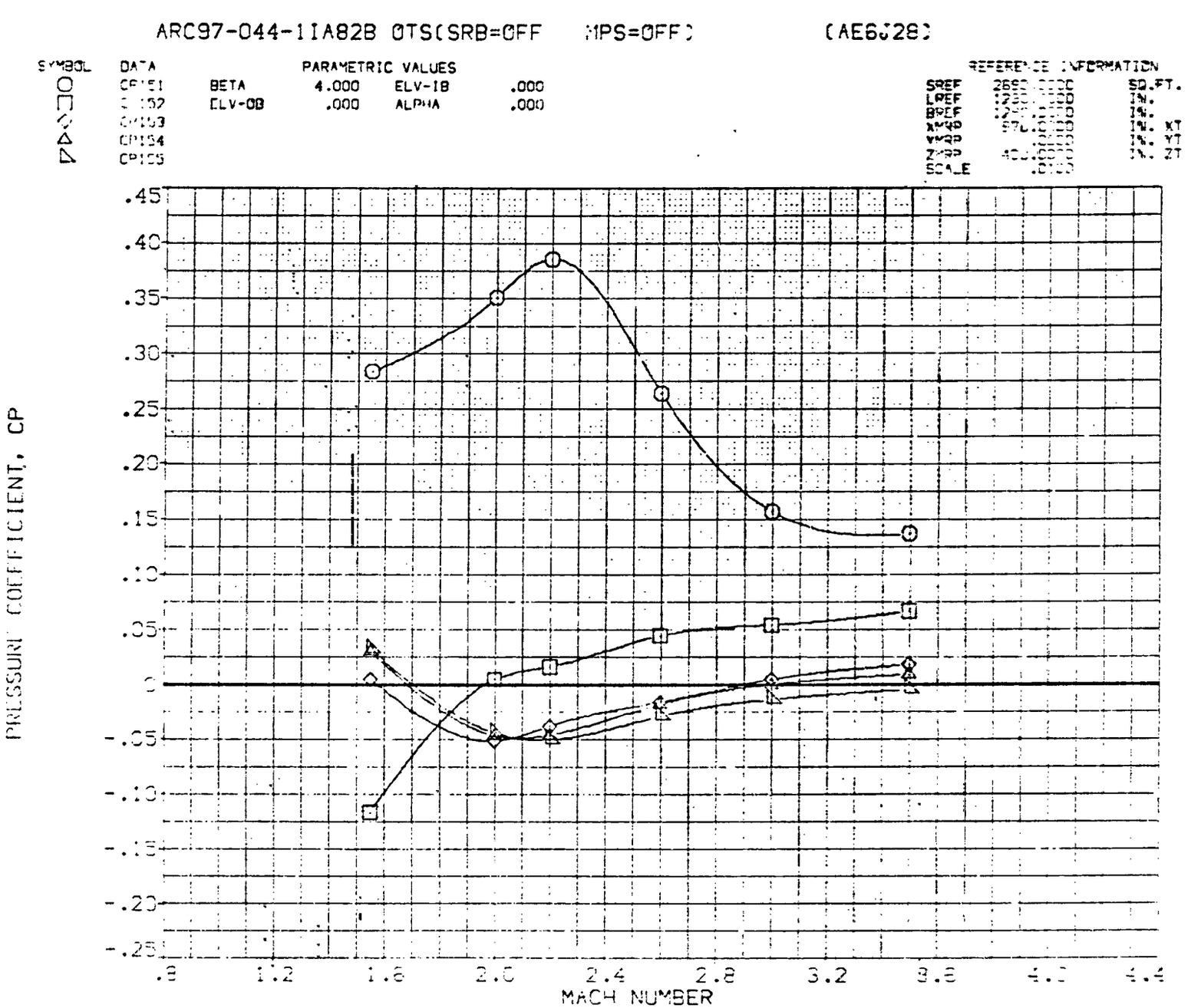


FIG. 89 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

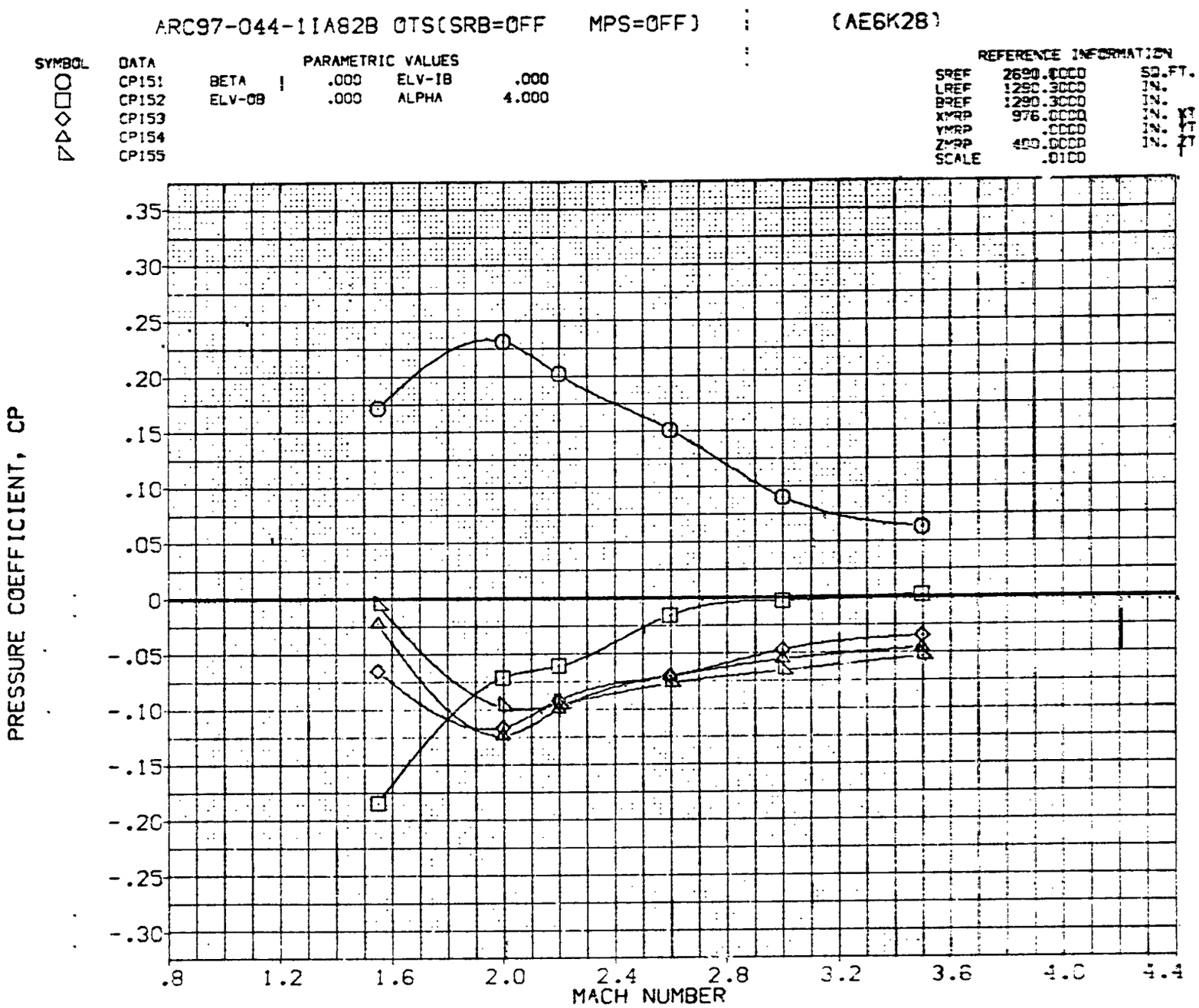


FIG. 89 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

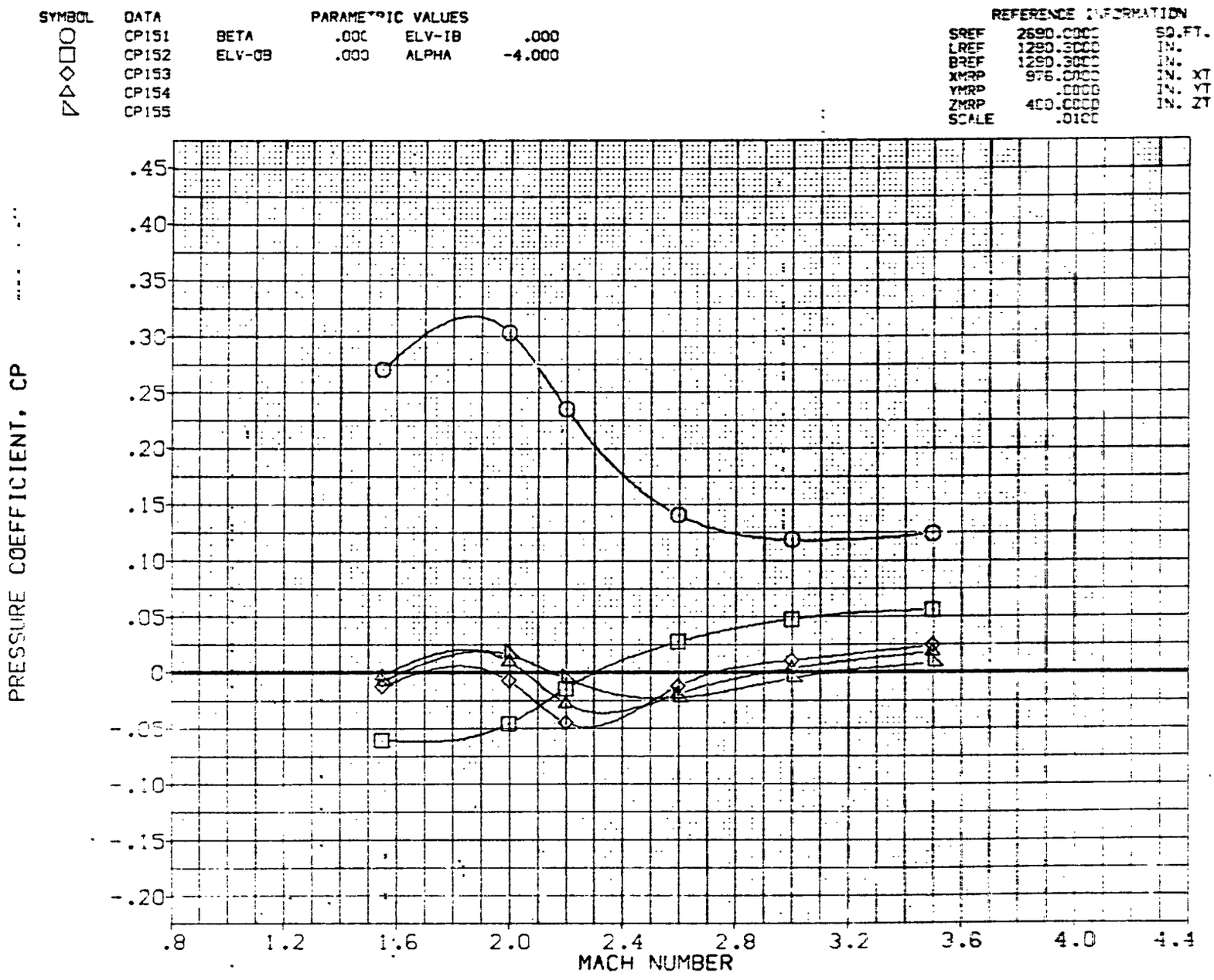


FIG. 90 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM; MPS=NOM-

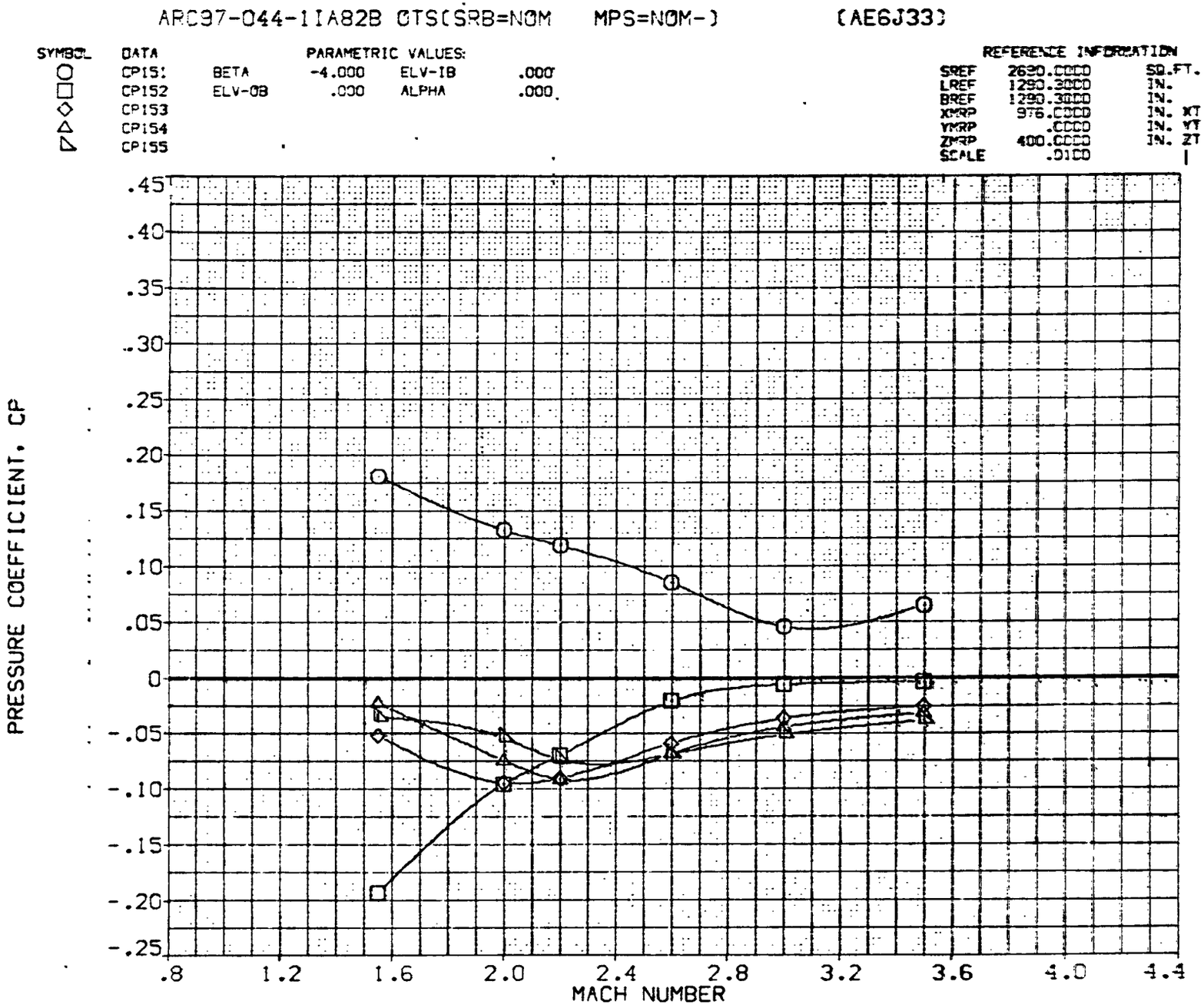


FIG. 90 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

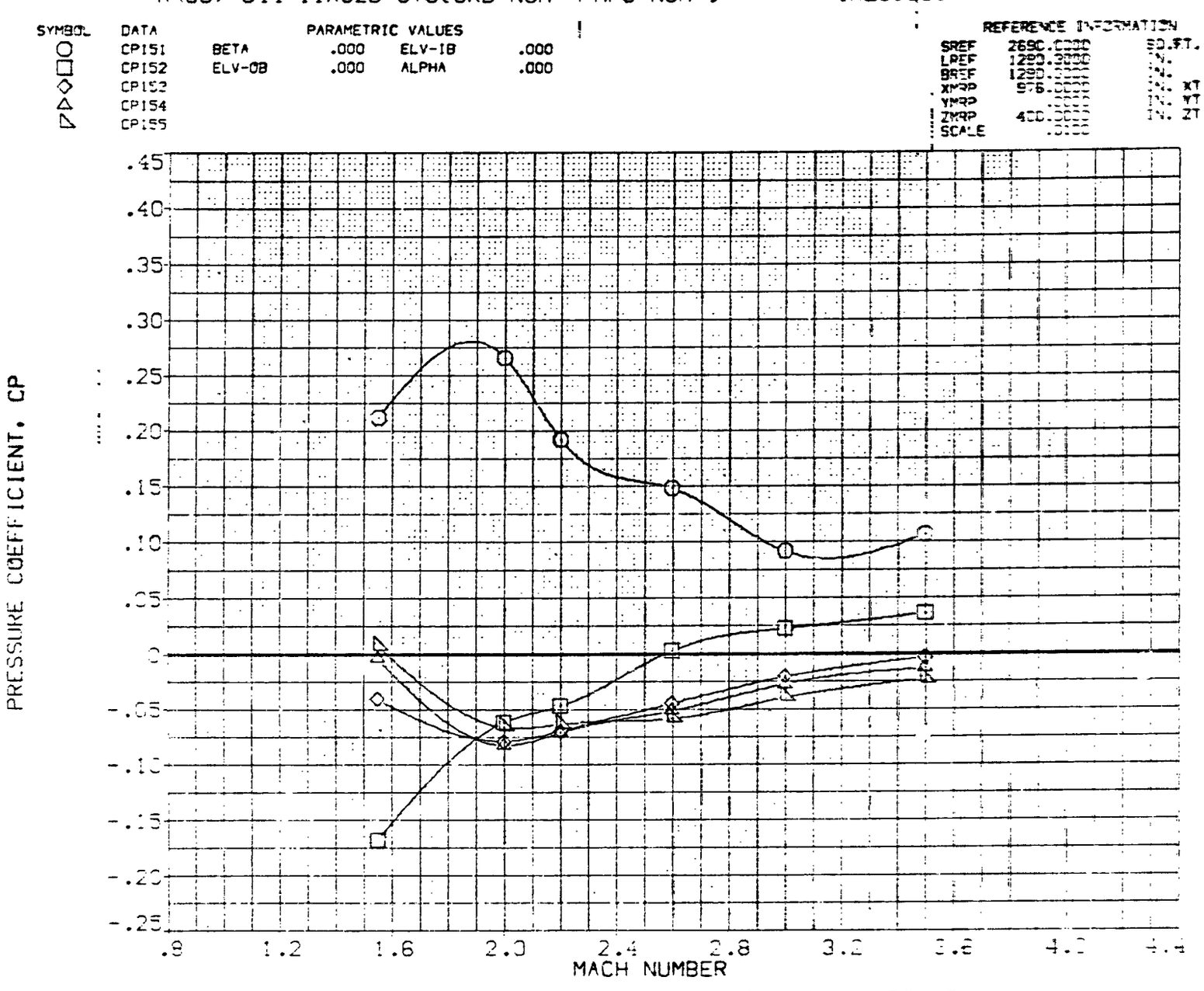


FIG. 90 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

APC97-044-11A82B OTS(SRB=NOM MPS=NOM-) (AE6J33)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP151	BETA	4.000	ELV-IB	.000
□	CP152	ELV-OB	.000	ALPHA	.000
◇	CP153				
△	CP154				
▽	CP155				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. MT
YMRP	.0000	IN. MT
ZMRP	400.0000	IN. MT
SCALE	.0100	

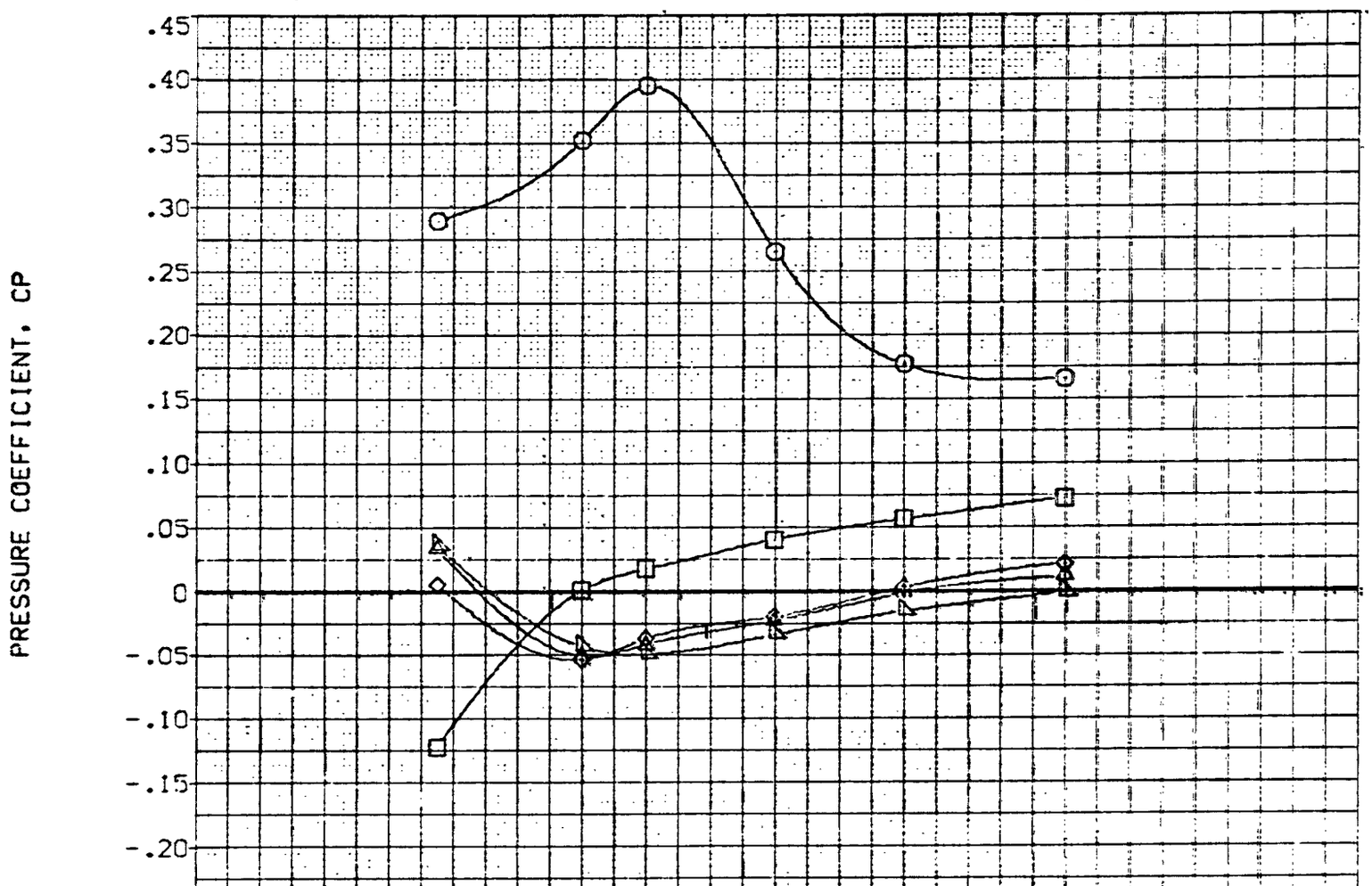


FIG. 90 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

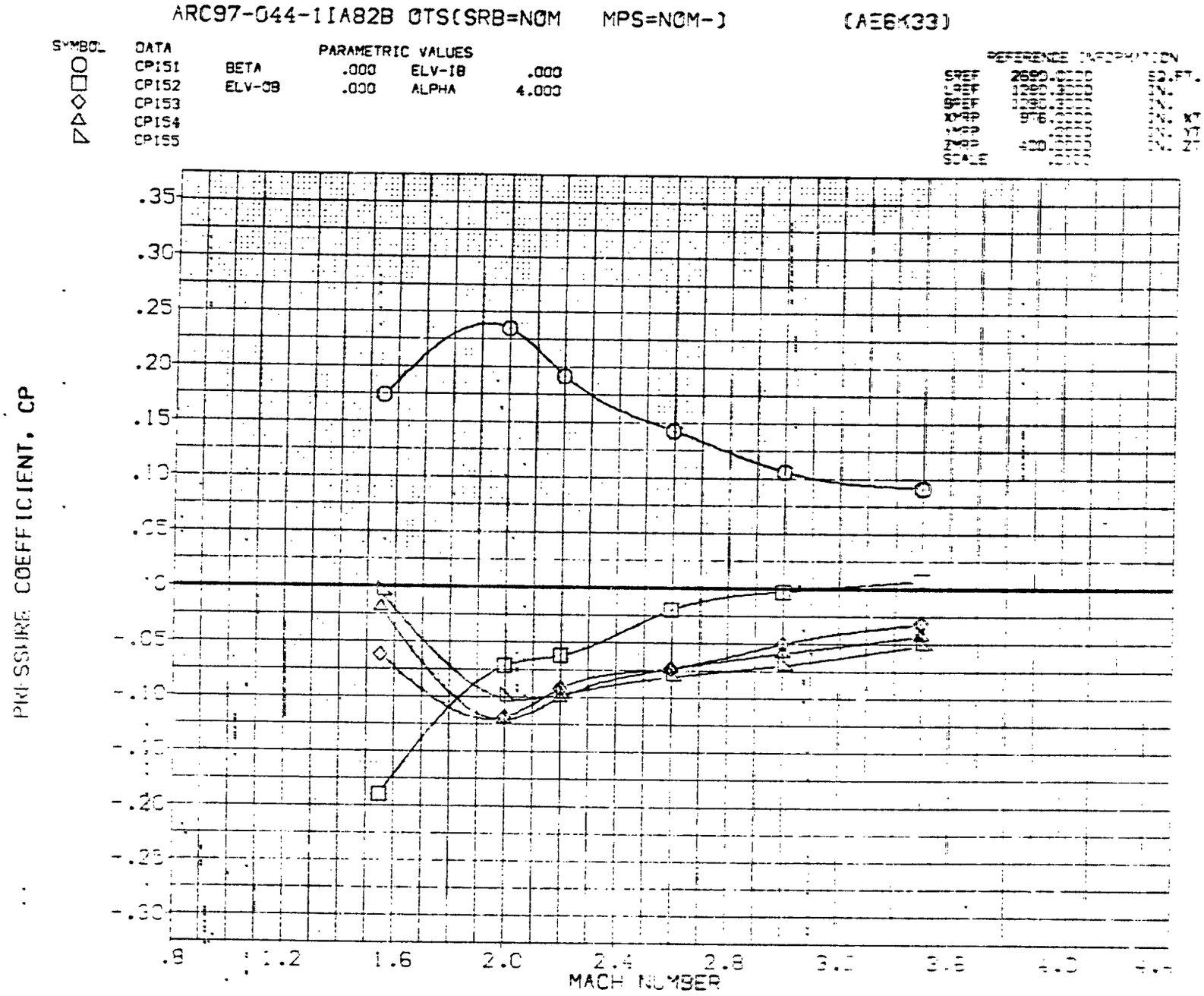


FIG. 90 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

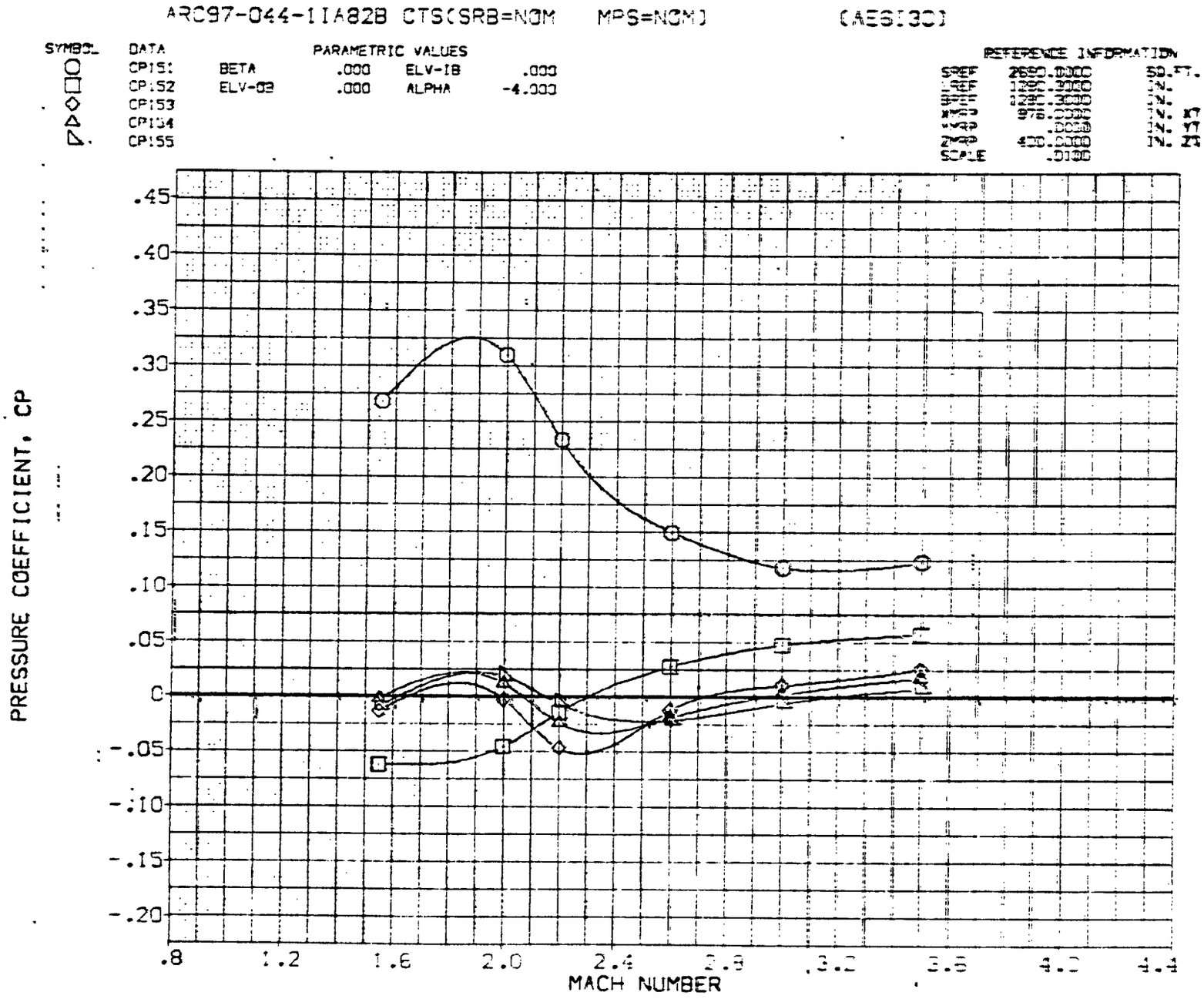


FIG. 91 - ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

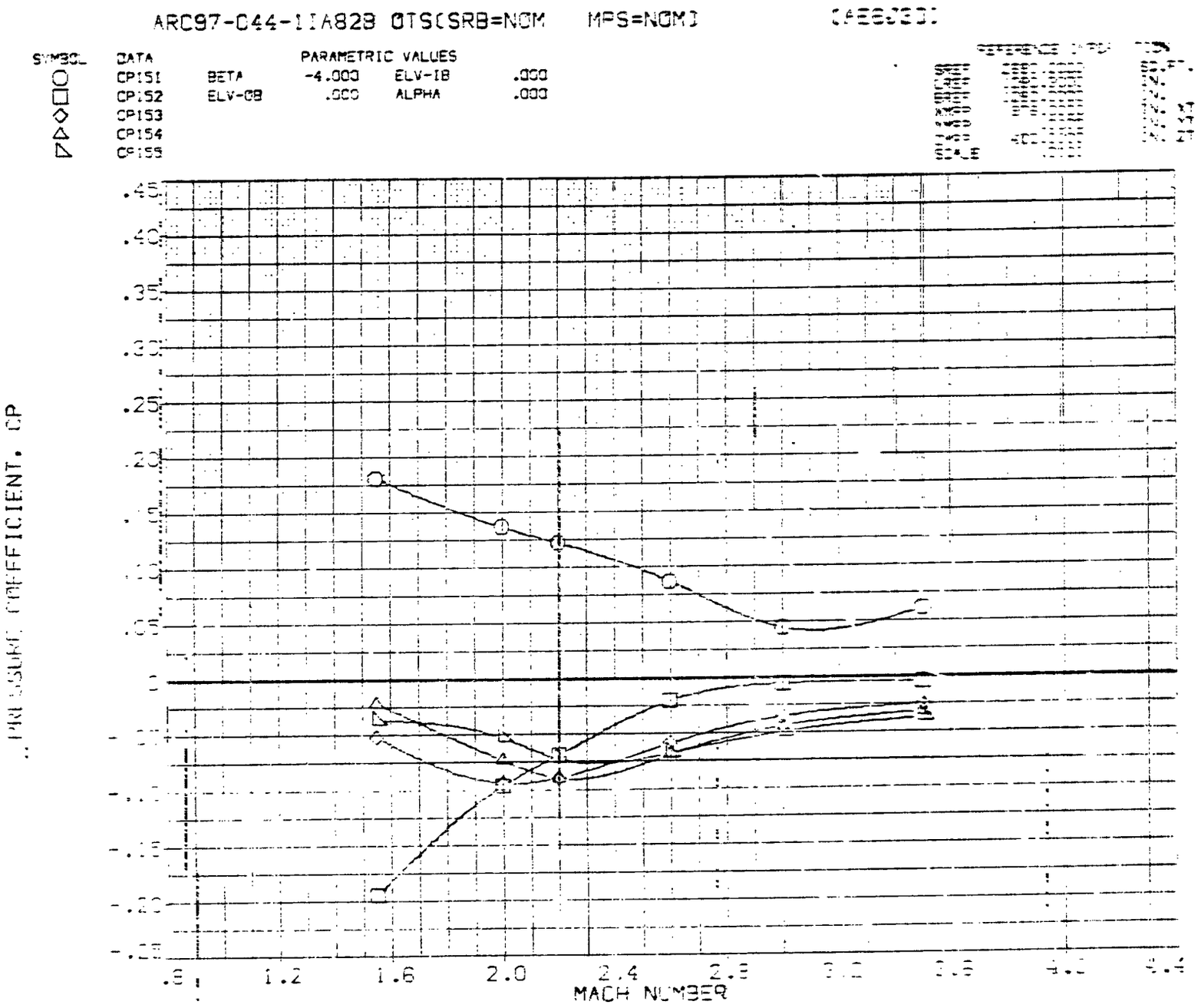


FIG. 91 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

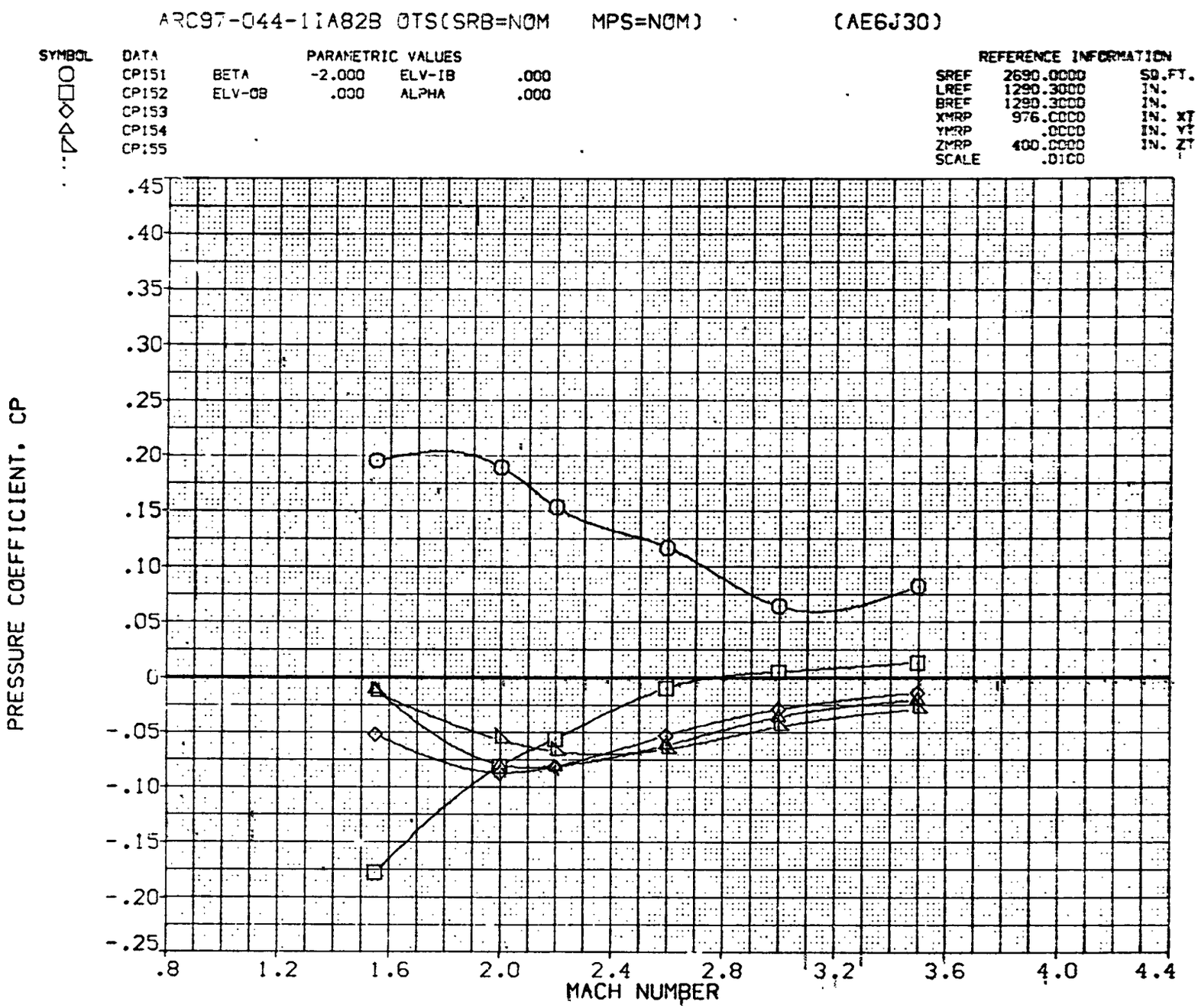


FIG. 91 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM) (AE6J30)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP151	BETA	.000	ELV-IB	.000
□	CP152	ELV-OB	.000	ALPHA	.000
◇	CP153				
△	CP154				
▷	CP15[illegible]				

REFERENCE INFORMATION

SREF	2690.000[illegible]	SQ.FT.
LREF	1290.300[illegible]	IN.
BREF	1290.300[illegible]	IN.
XMRP	976.000[illegible]	IN. XT
YMRP	.000[illegible]	IN. YT
ZMRP	400.000[illegible]	IN. ZT
SCALE	.010[illegible]	

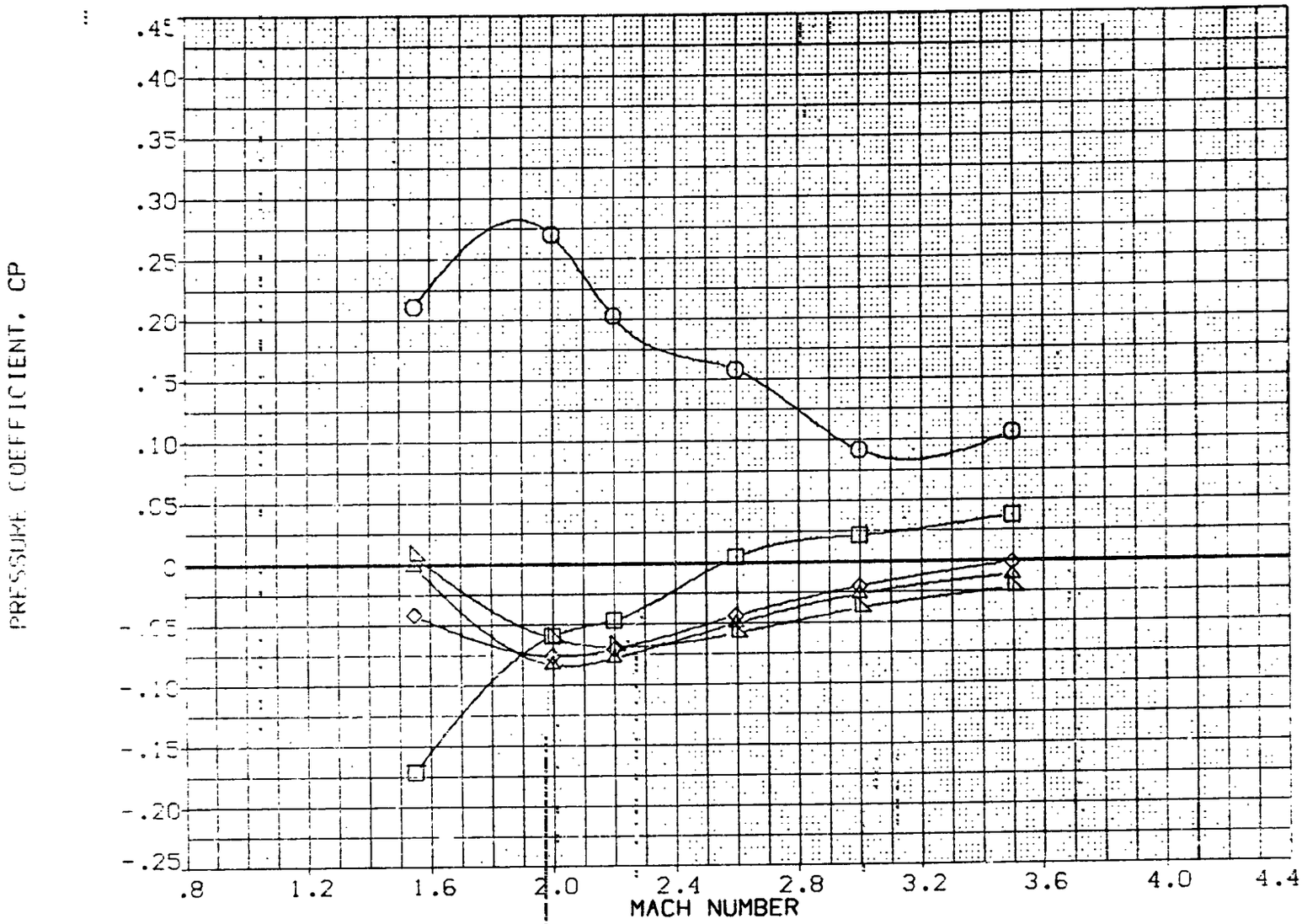


FIG. 91 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

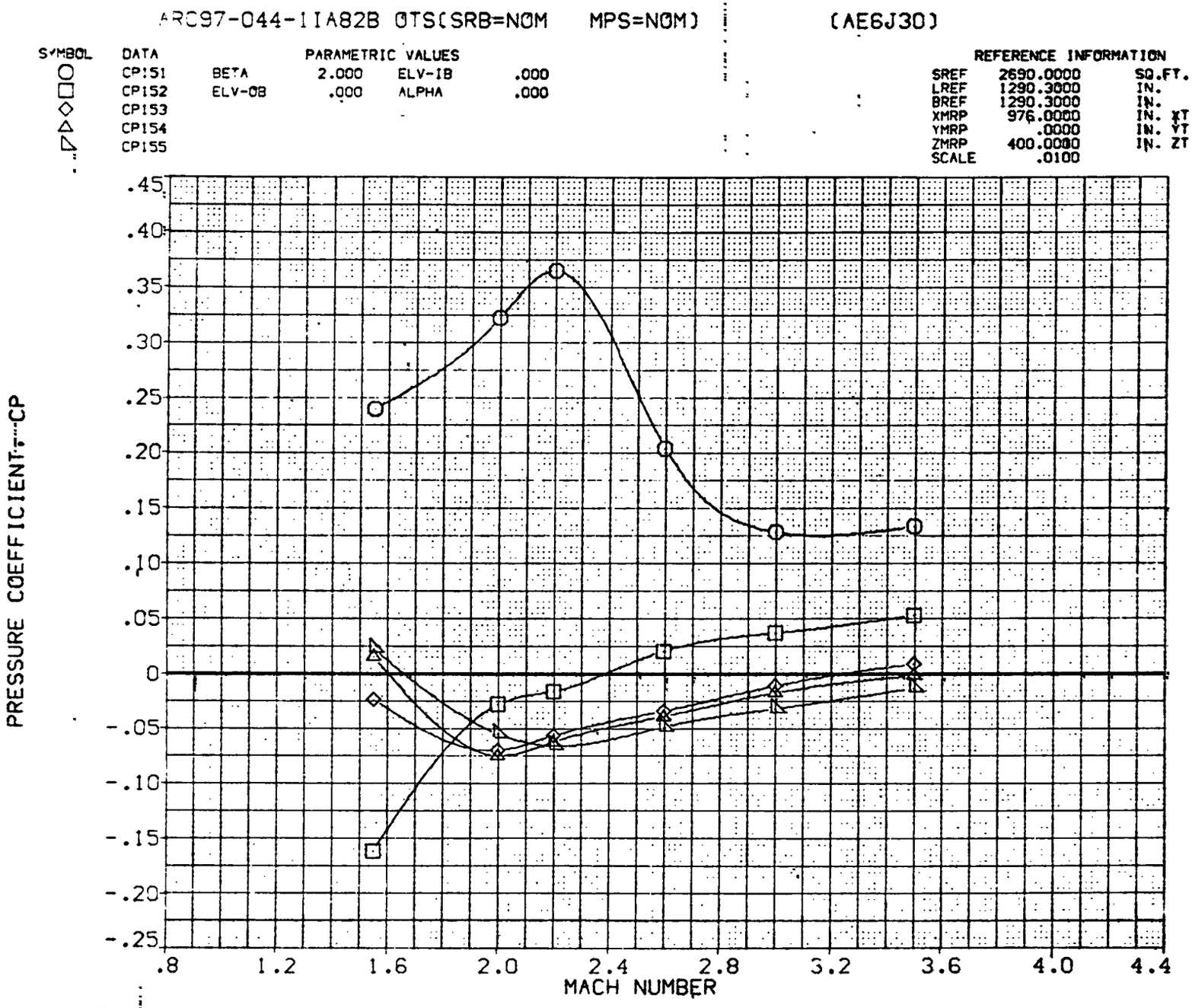


FIG. 91 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

ARC97-044-1IA82B 0TS(SRB=N0M MPS=N0M) (AE6J30)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP151	BETA	4.000	ELV-IB	.000
□	CP152	ELV-0B	.000	ALPHA	.000
◇	CP153				
△	CP154				
▽	CP155				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

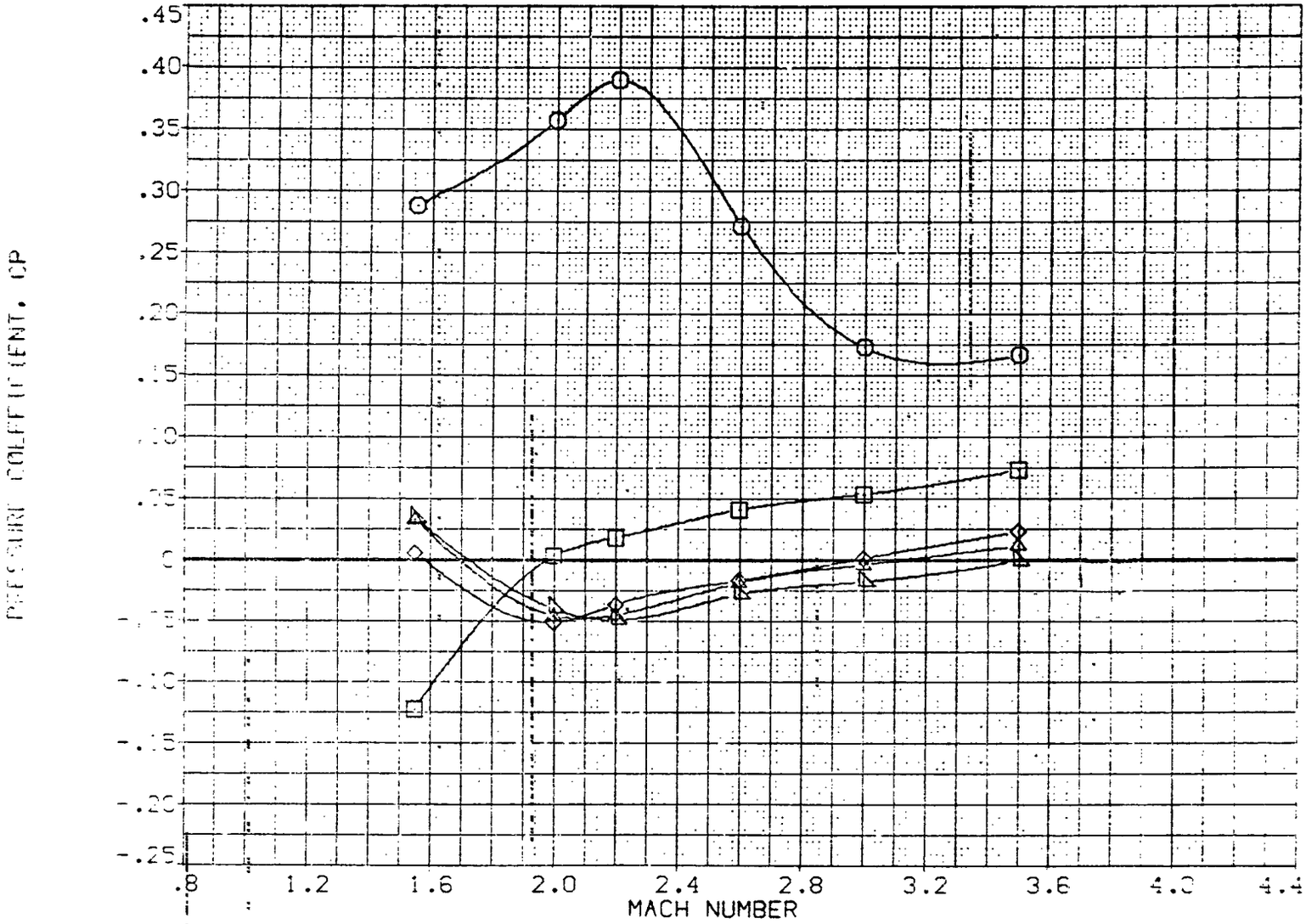


FIG. 91 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=N0M, MPS=N0M

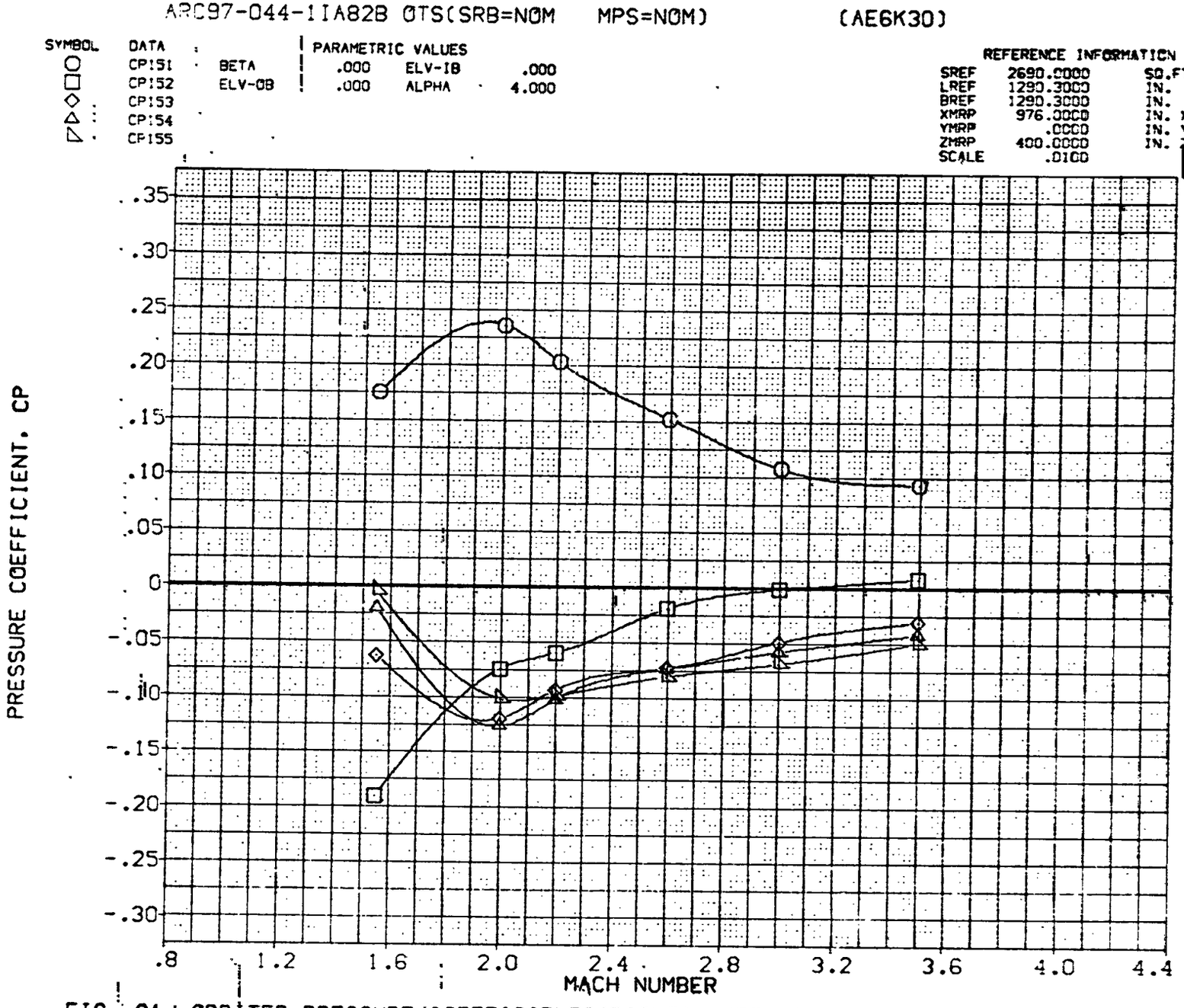


FIG. 91 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=N0M, MPS=N0M

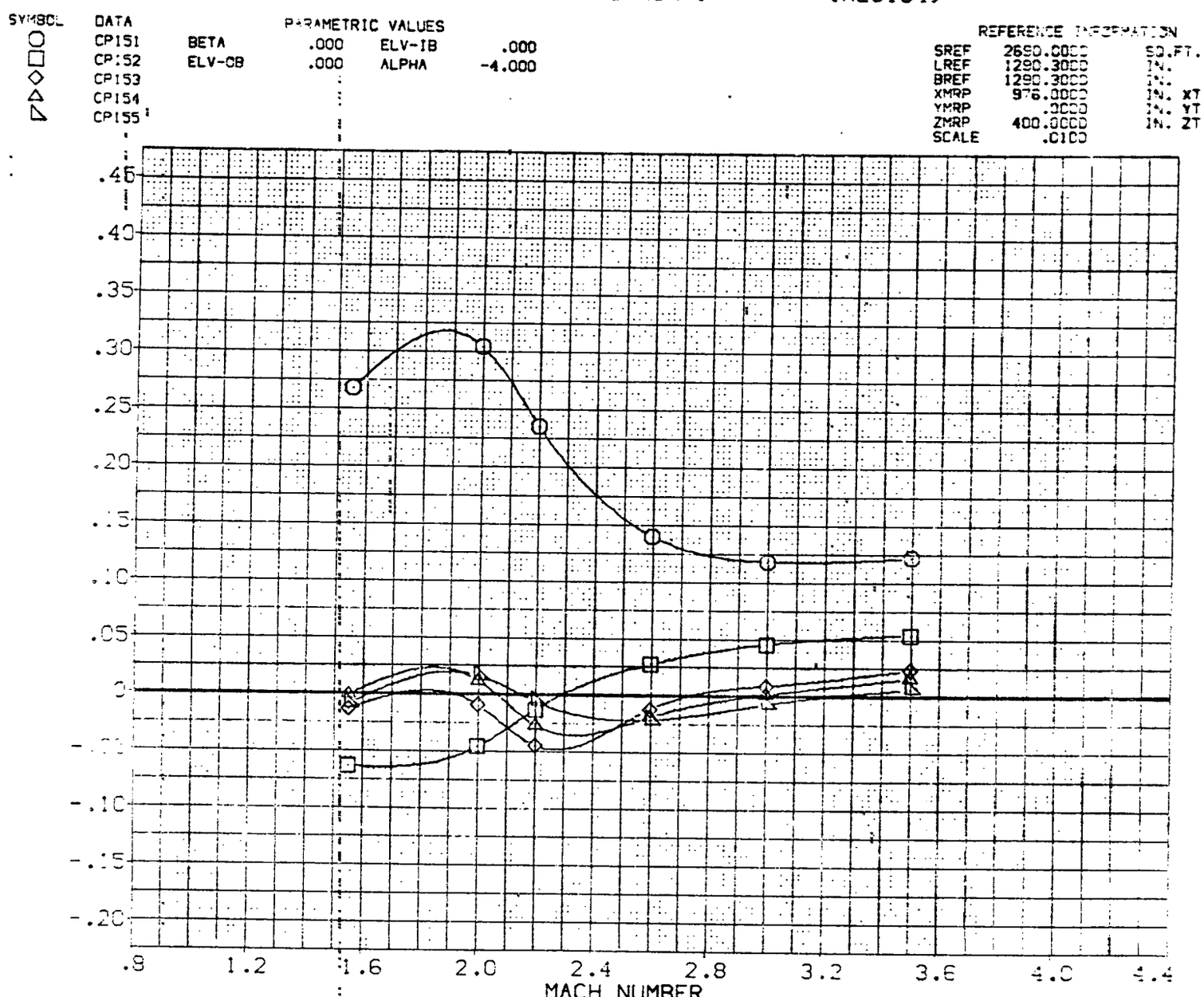


FIG. 92 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

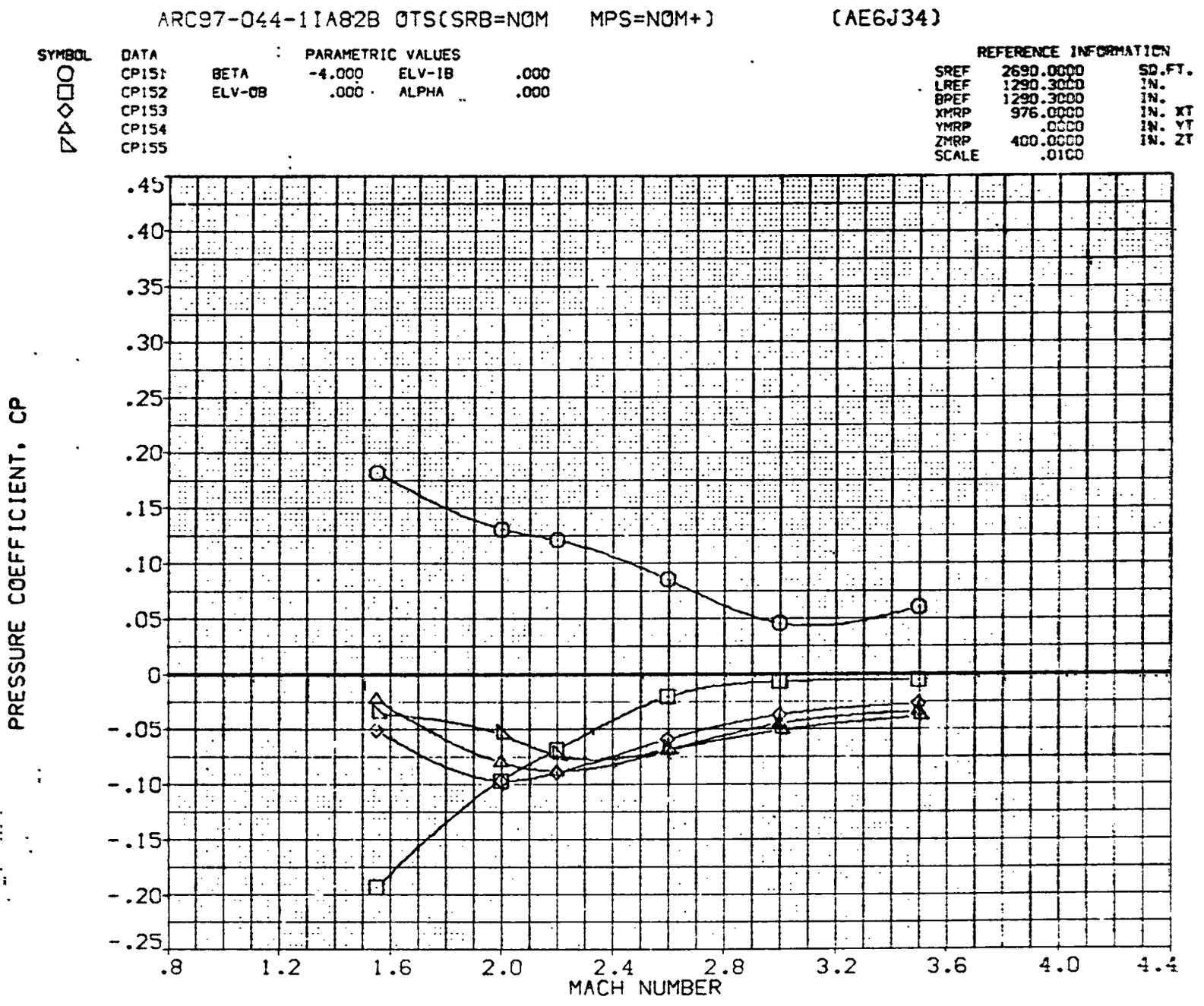


FIG. 92 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

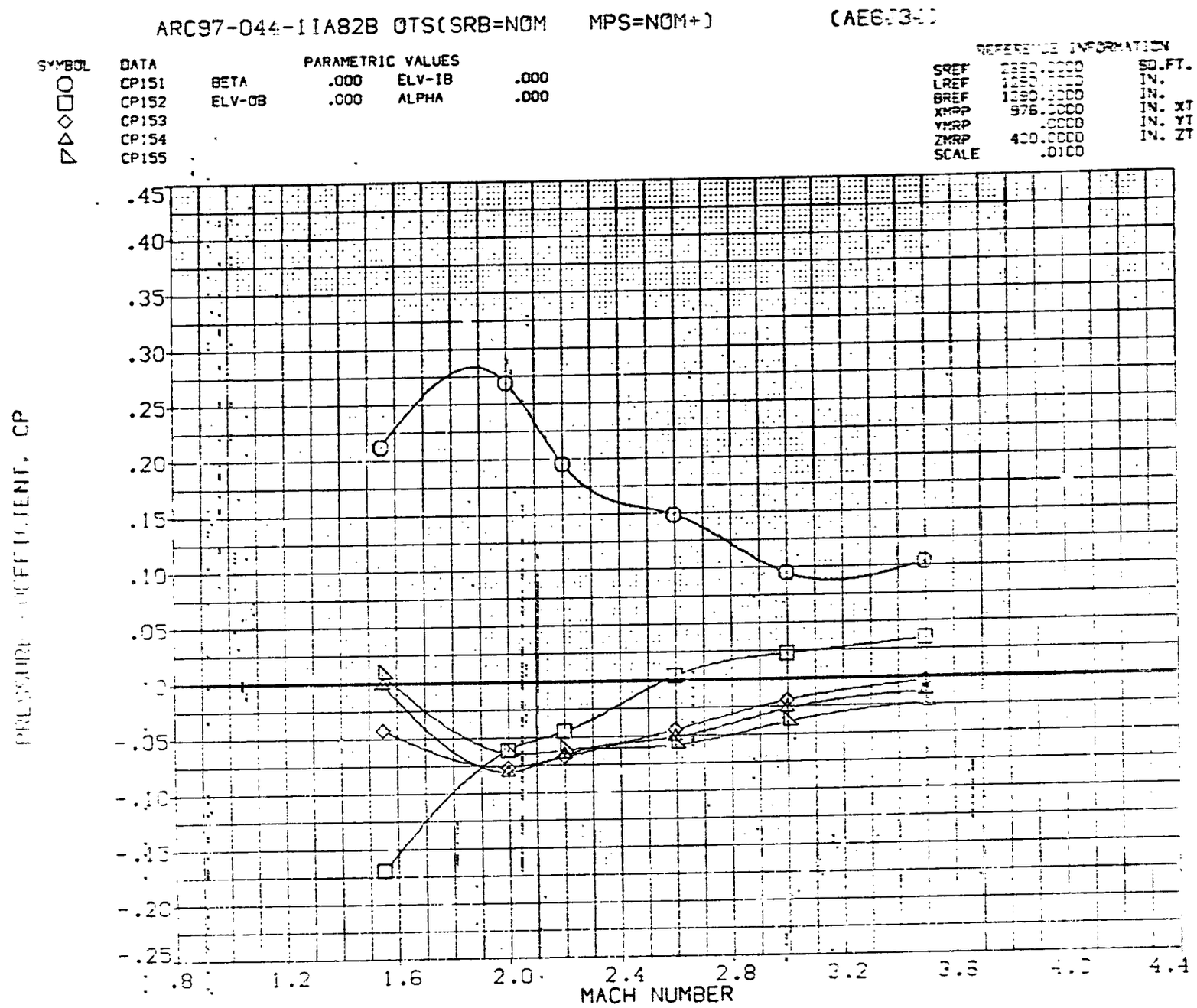


FIG. 92 0RBITER PRESSURE C0EFFICIENTS(RIGHT) SRB=N0M, MPS=N0M+

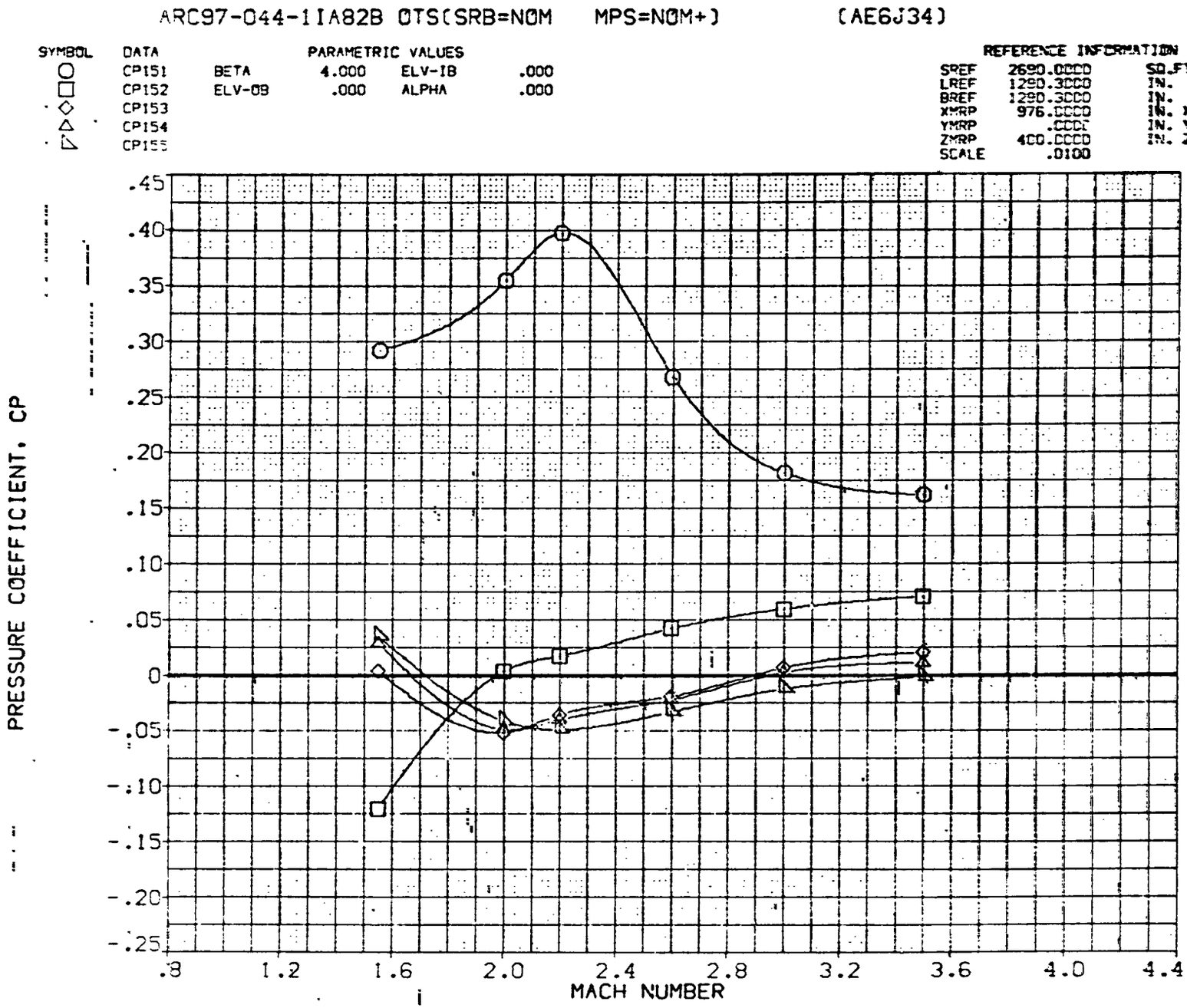


FIG. 92 ORBITER PRESSURE COEFFICIENTS(RIGHT): SRB=NOM, MPS=NOM+

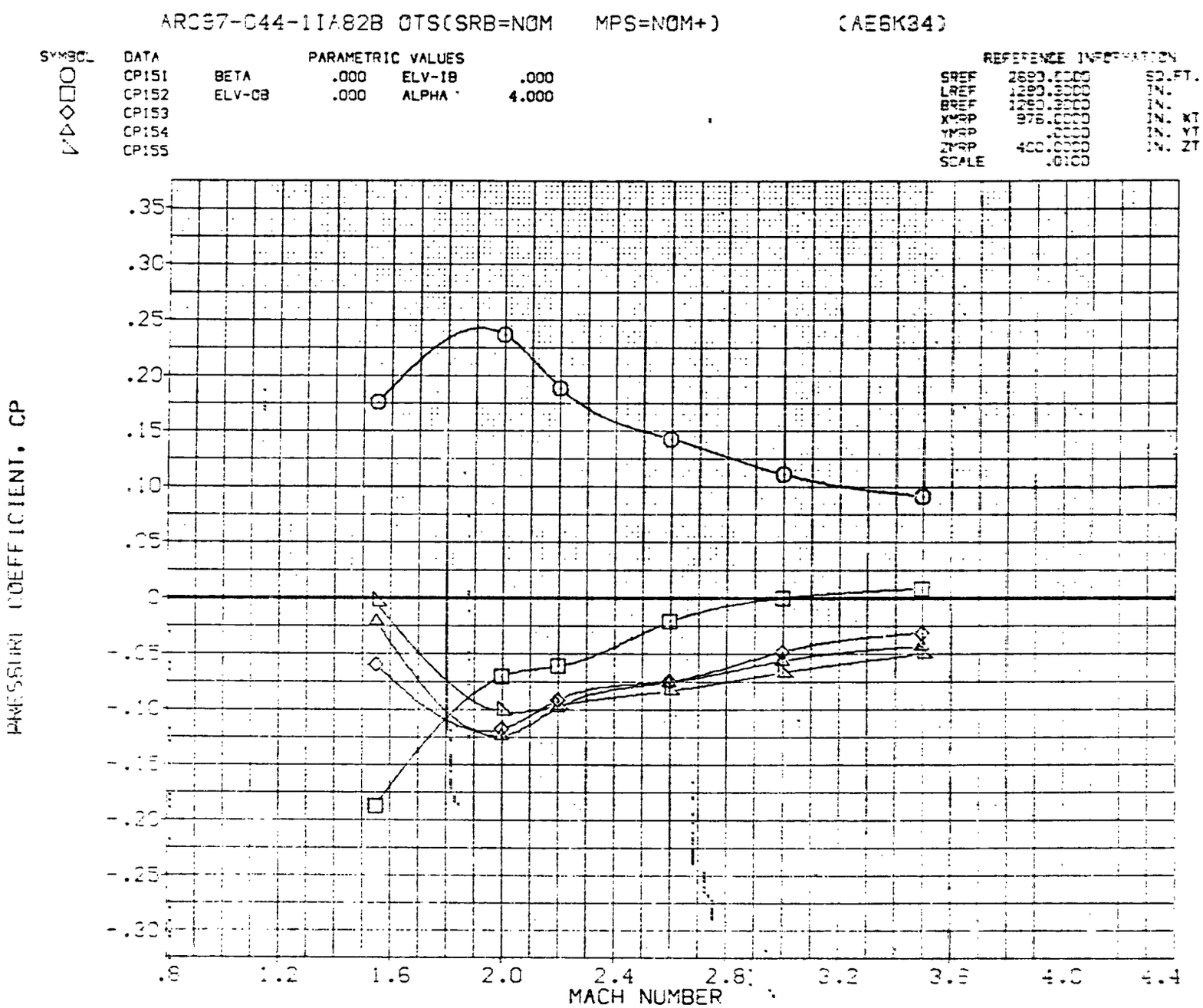


FIG. 92 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

ARC97-044-1IA82B CTS(SRB=OFF MPS=OFF) (AE6I28)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP156	BETA	.000	ELV-IB	.000
□	CP157	ELV-OB	.000	ALPHA	-4.000
◇	CP158				
△	CP159				
◺	CP160				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

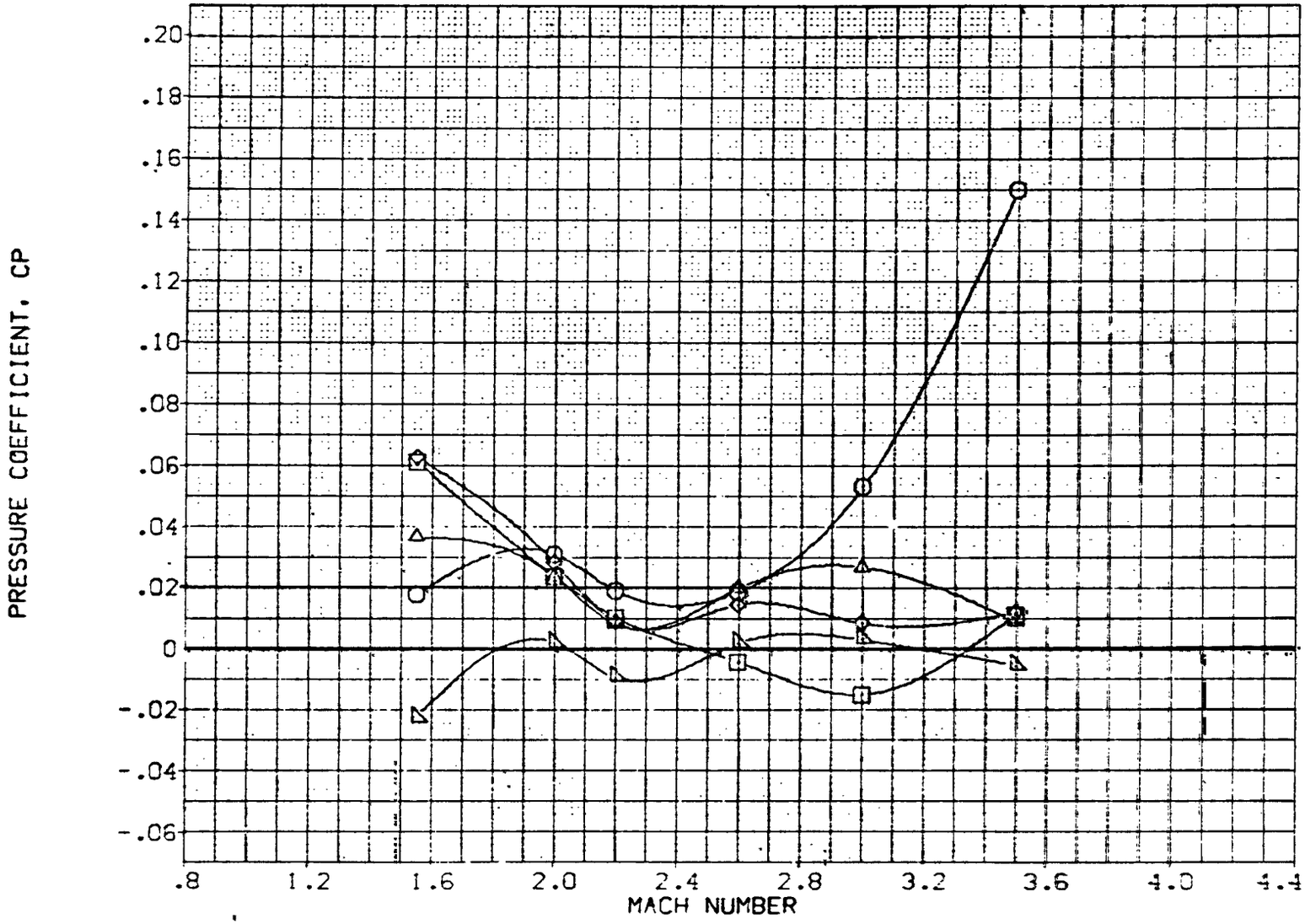


FIG. 93 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF; MPS=OFF

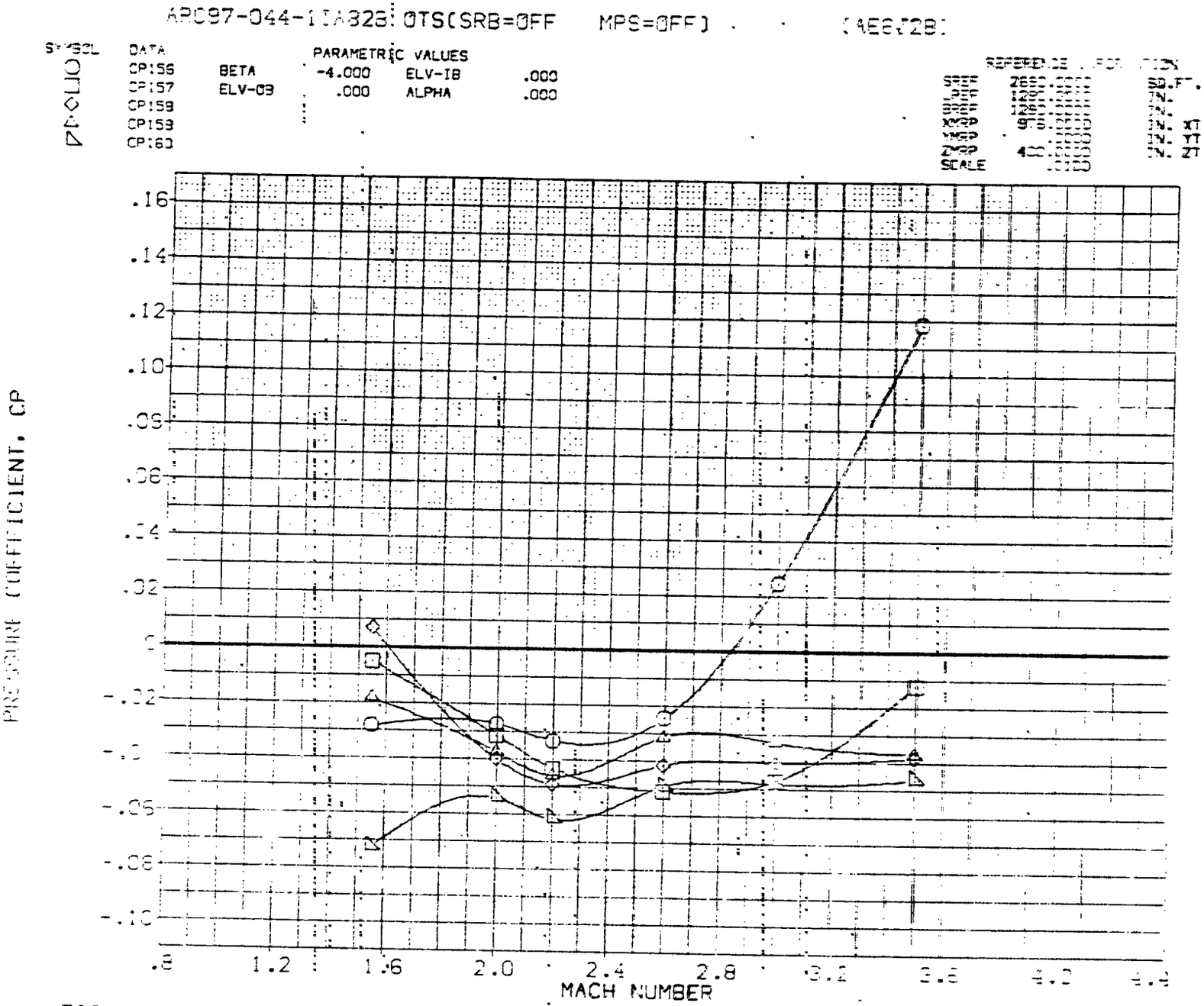


FIG. 93 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

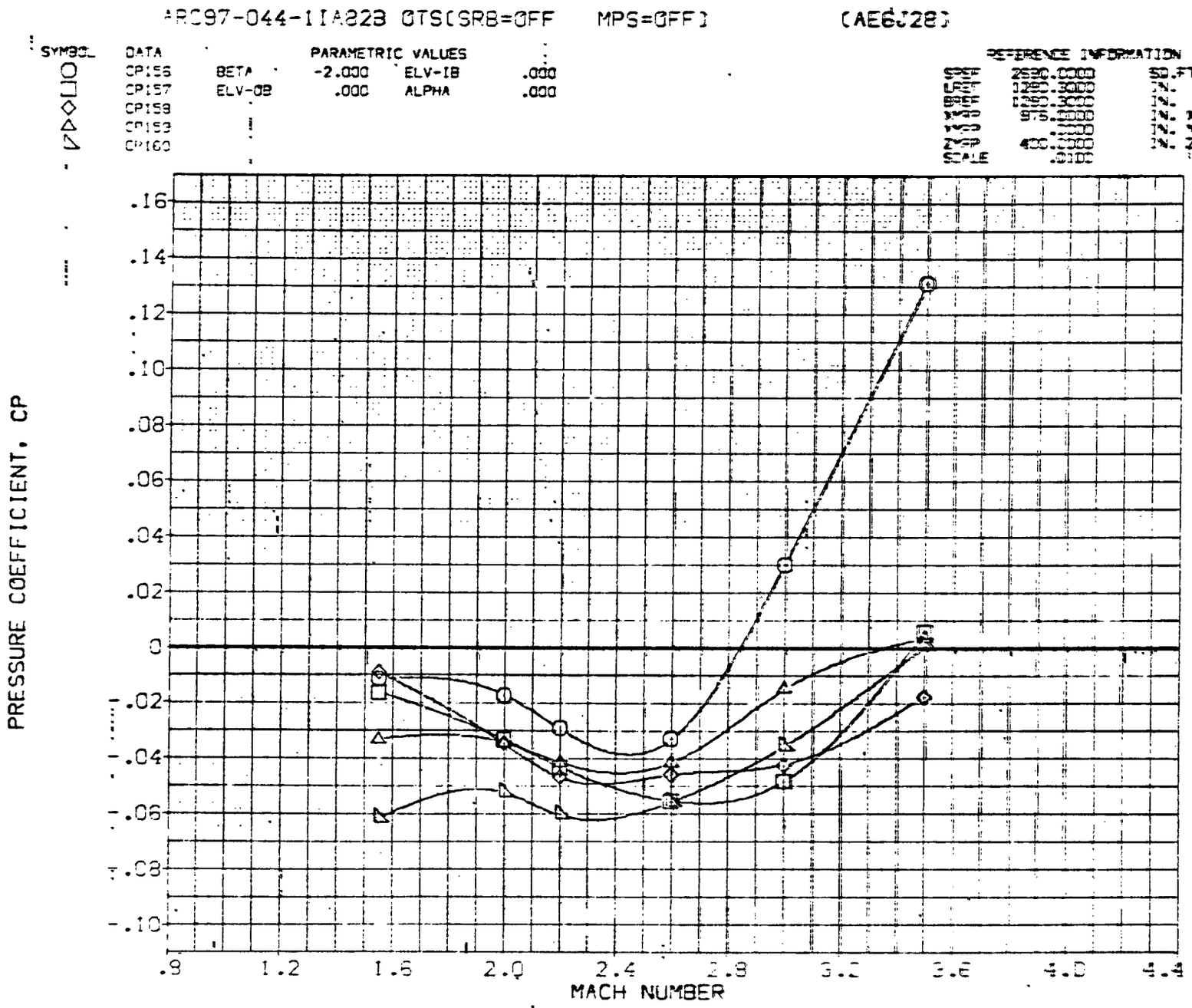


FIG. 93 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

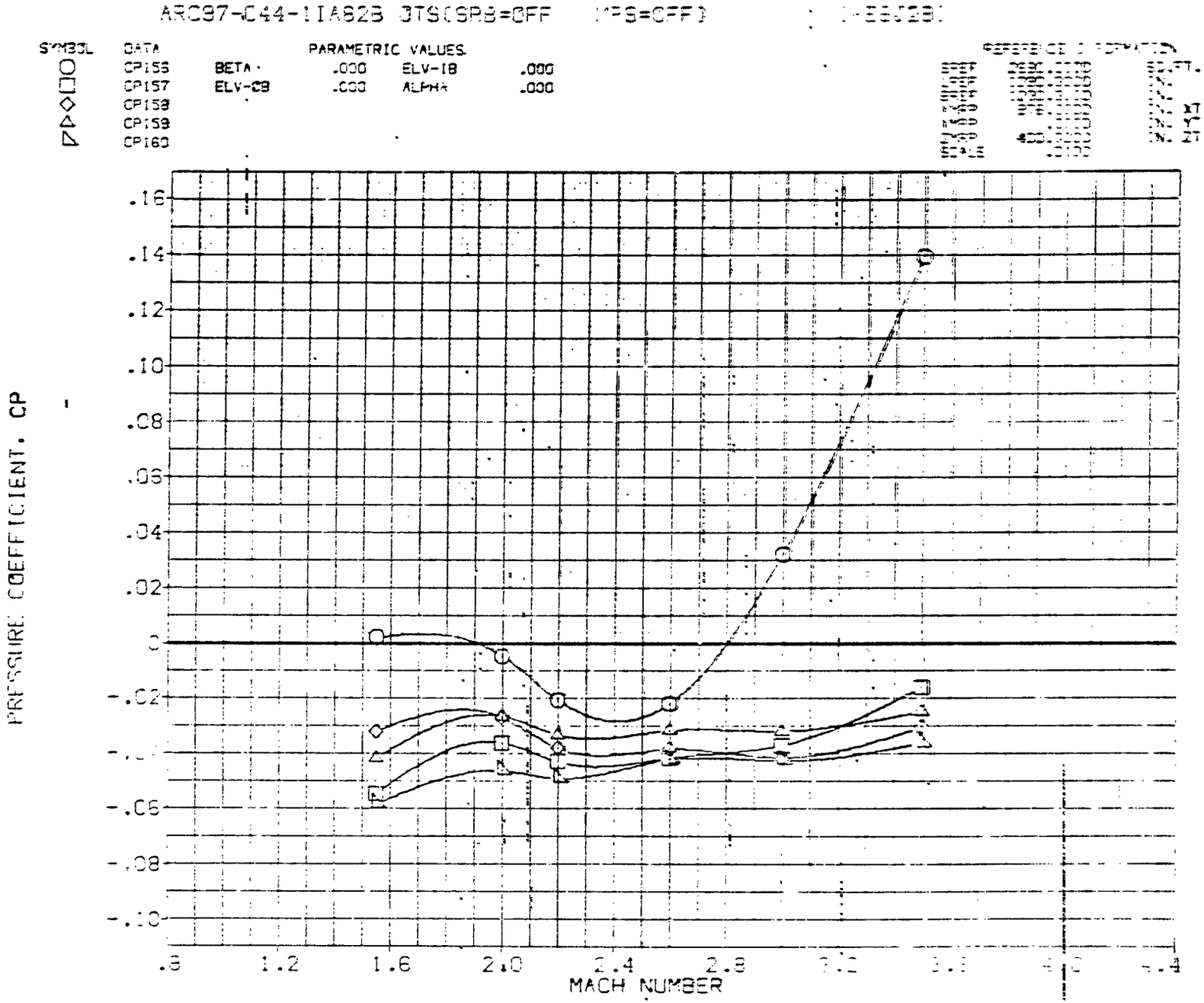


FIG. 93 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

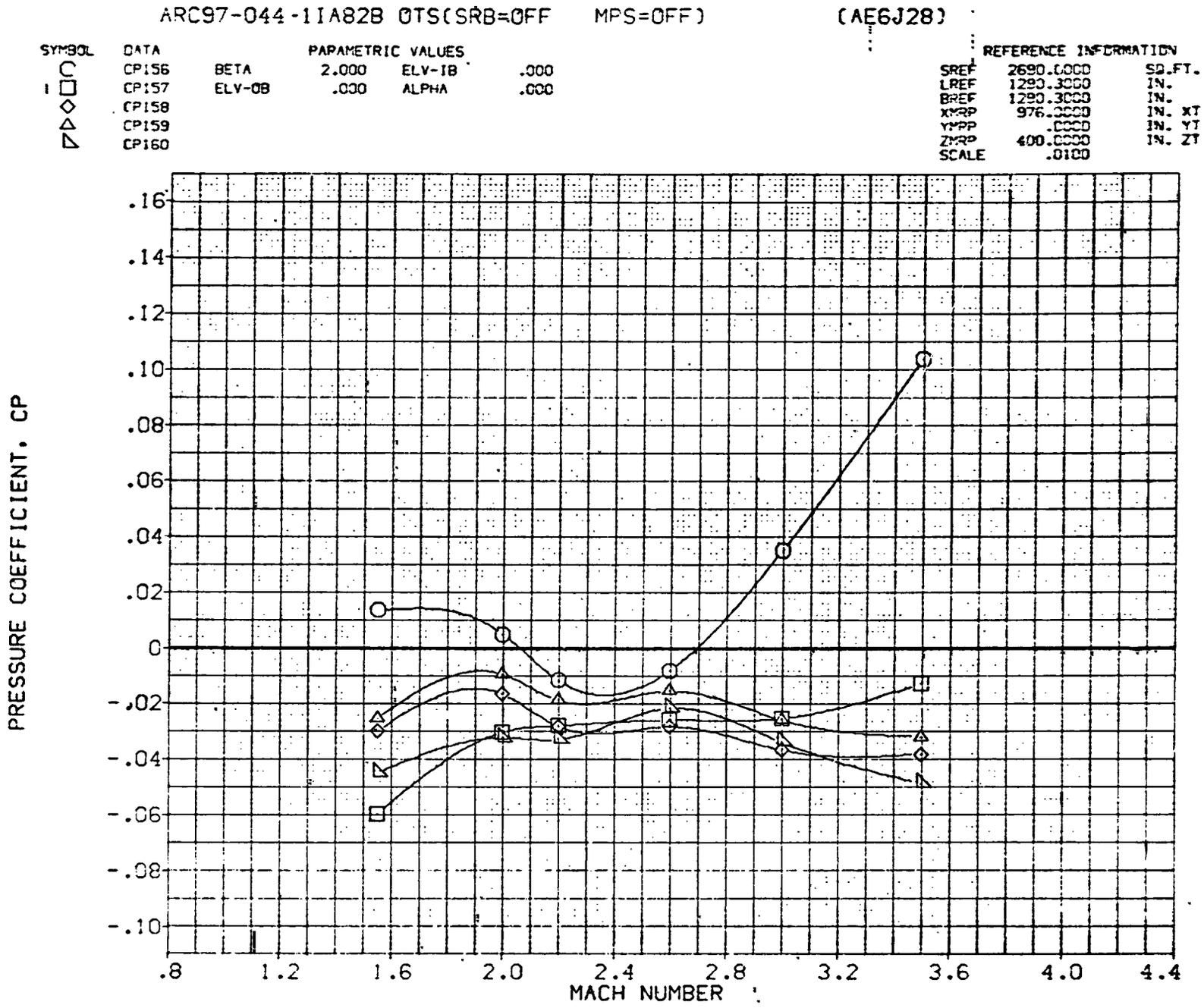


FIG. 93 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

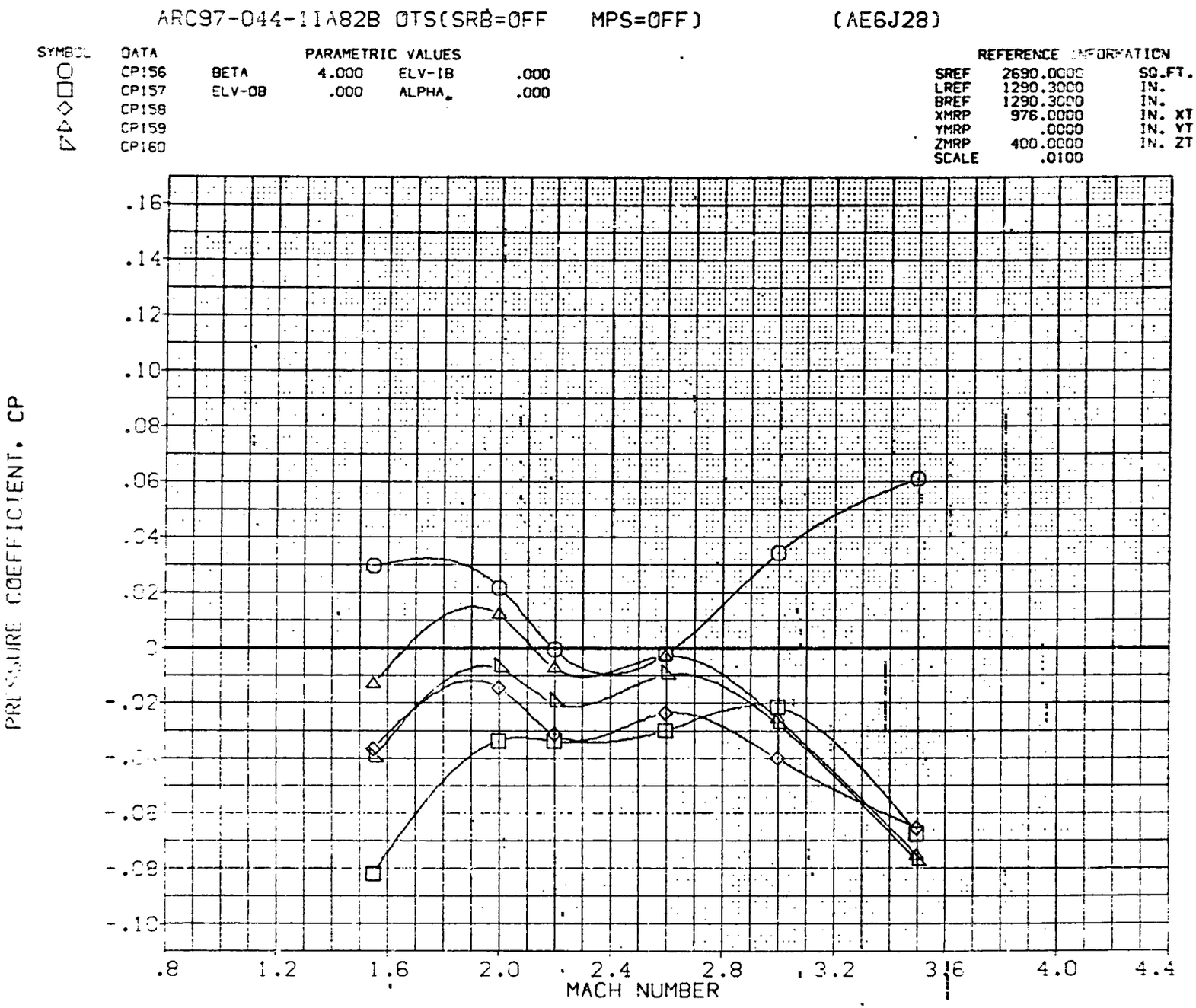


FIG. 93 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=OFF, MPS=OFF

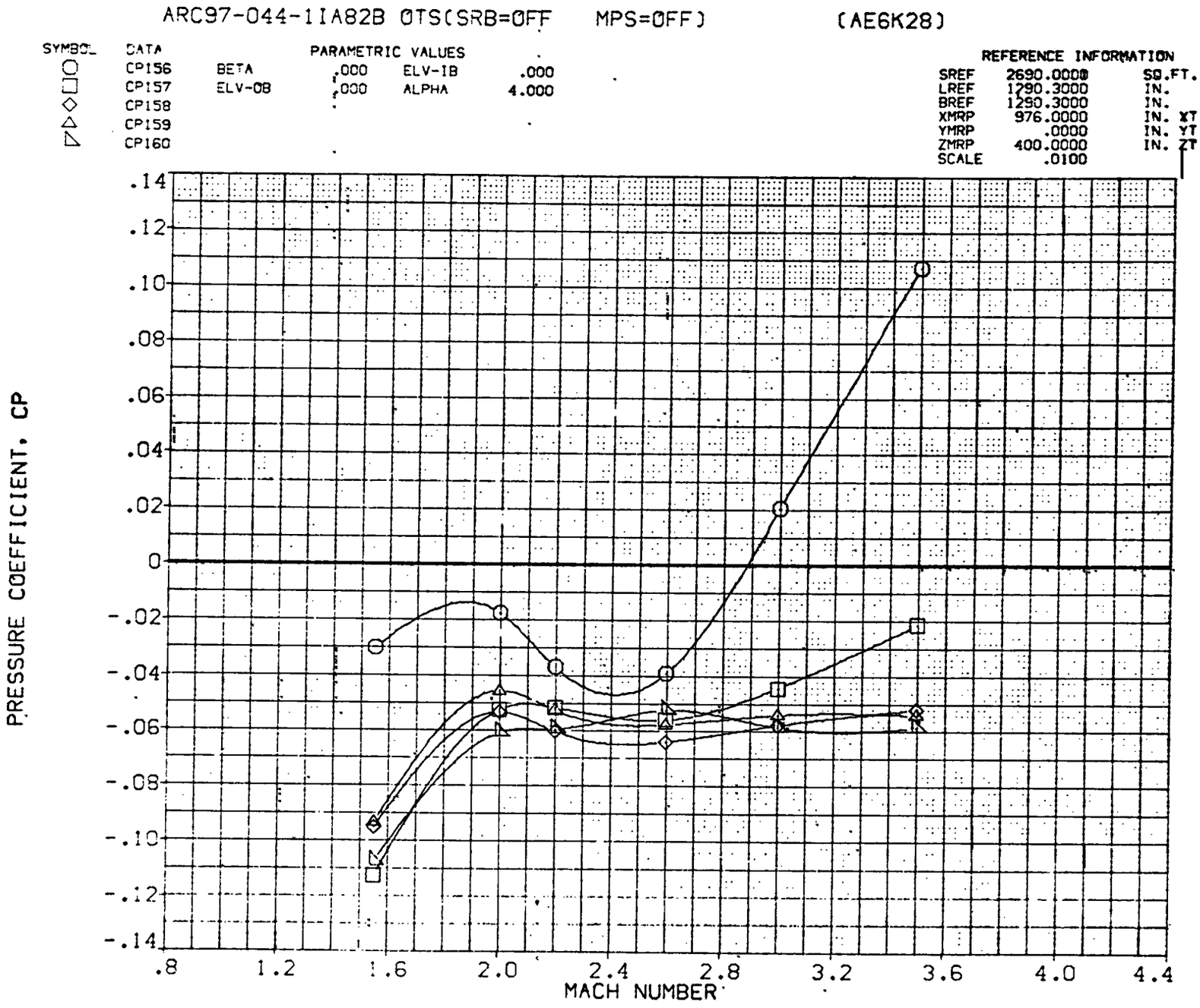


FIG. 93 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=0FF, MPS=0FF

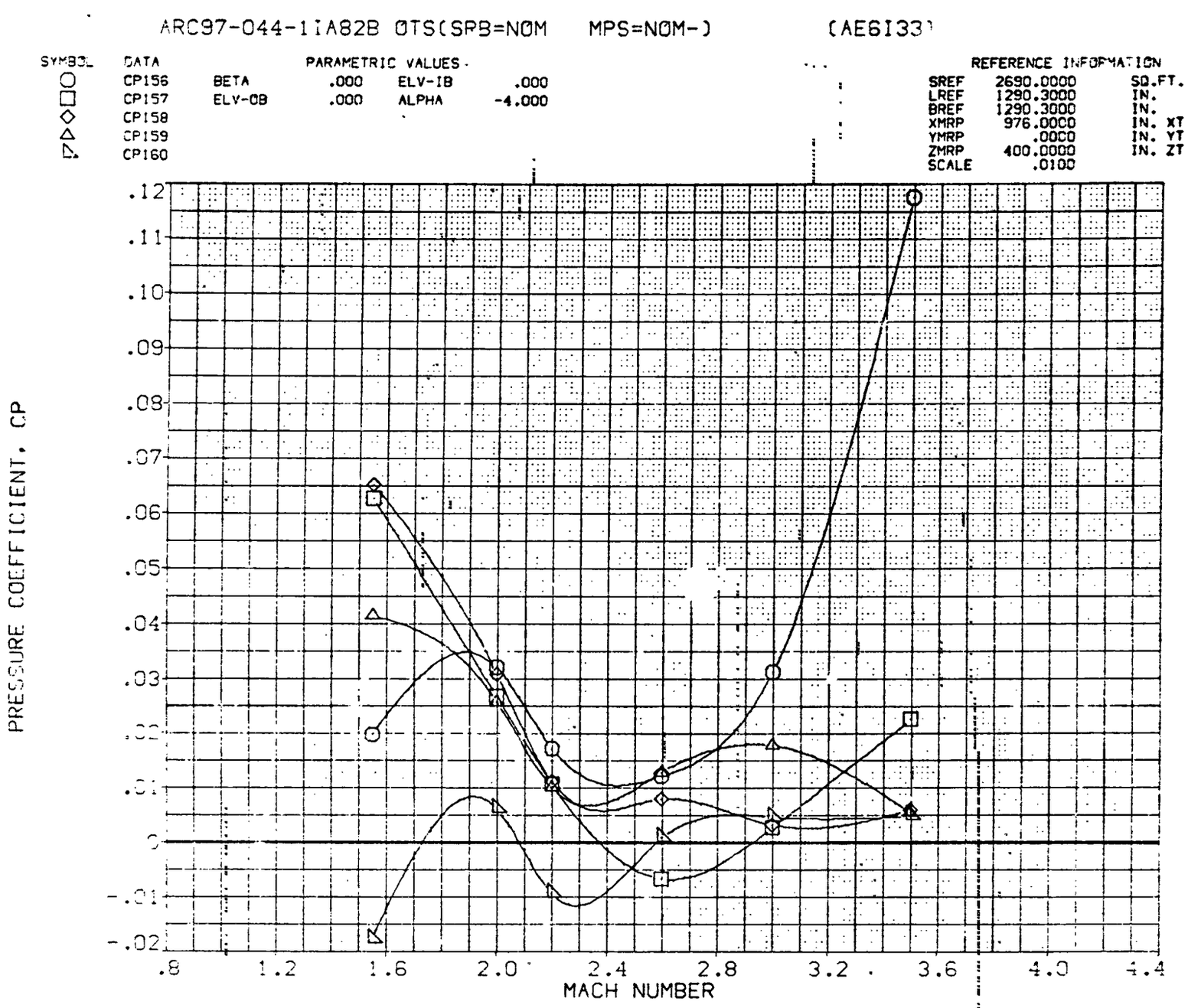


FIG. 94 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=N0M, MPS=N0M-

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM-) (AE6J33)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP156	BETA	-4.000	ELV-IB	.000
□	CP157	ELV-OB	.000	ALPHA	.000
◇	CP158				
△	CP159				
▽	CP160				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

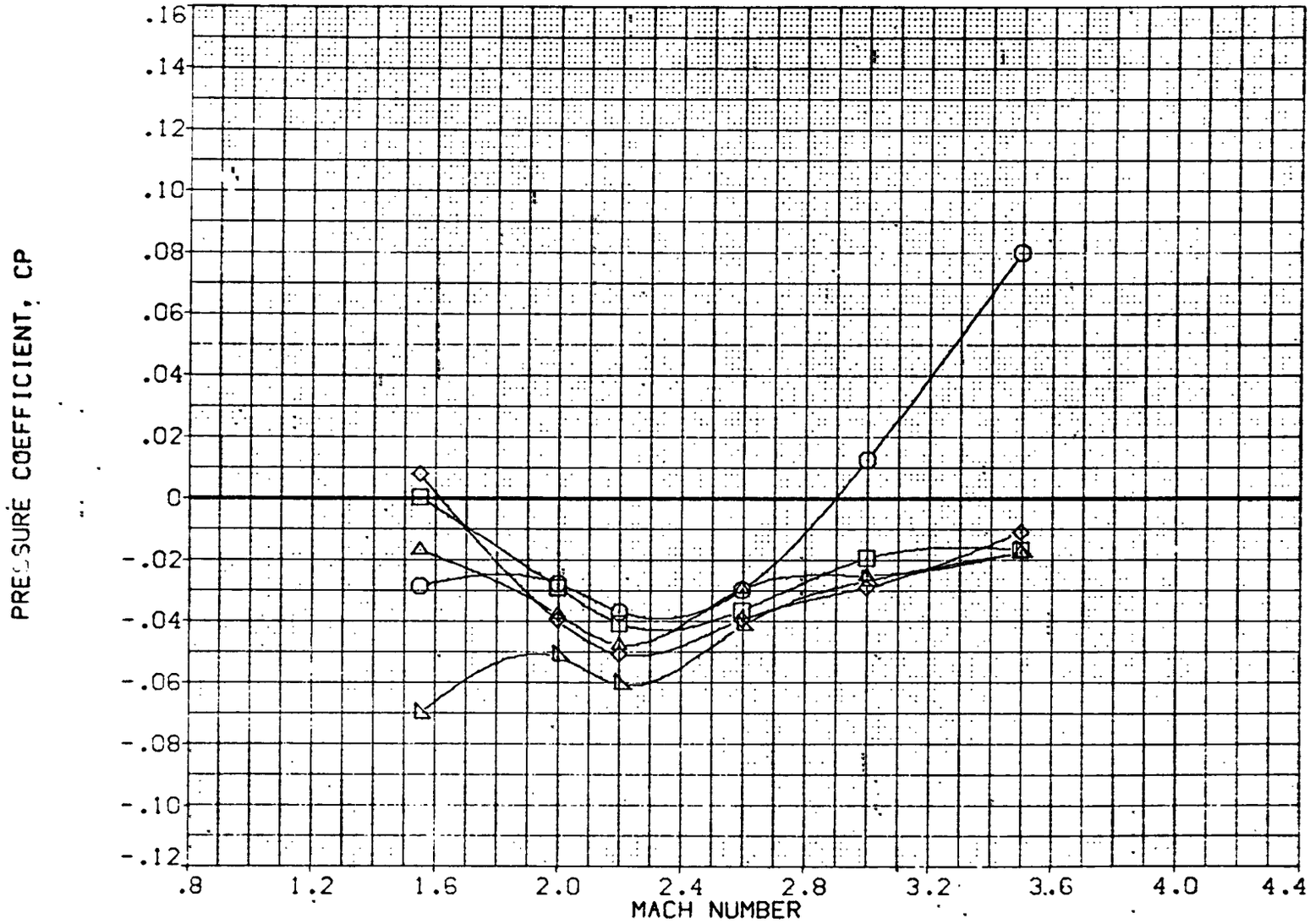


FIG. 94 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

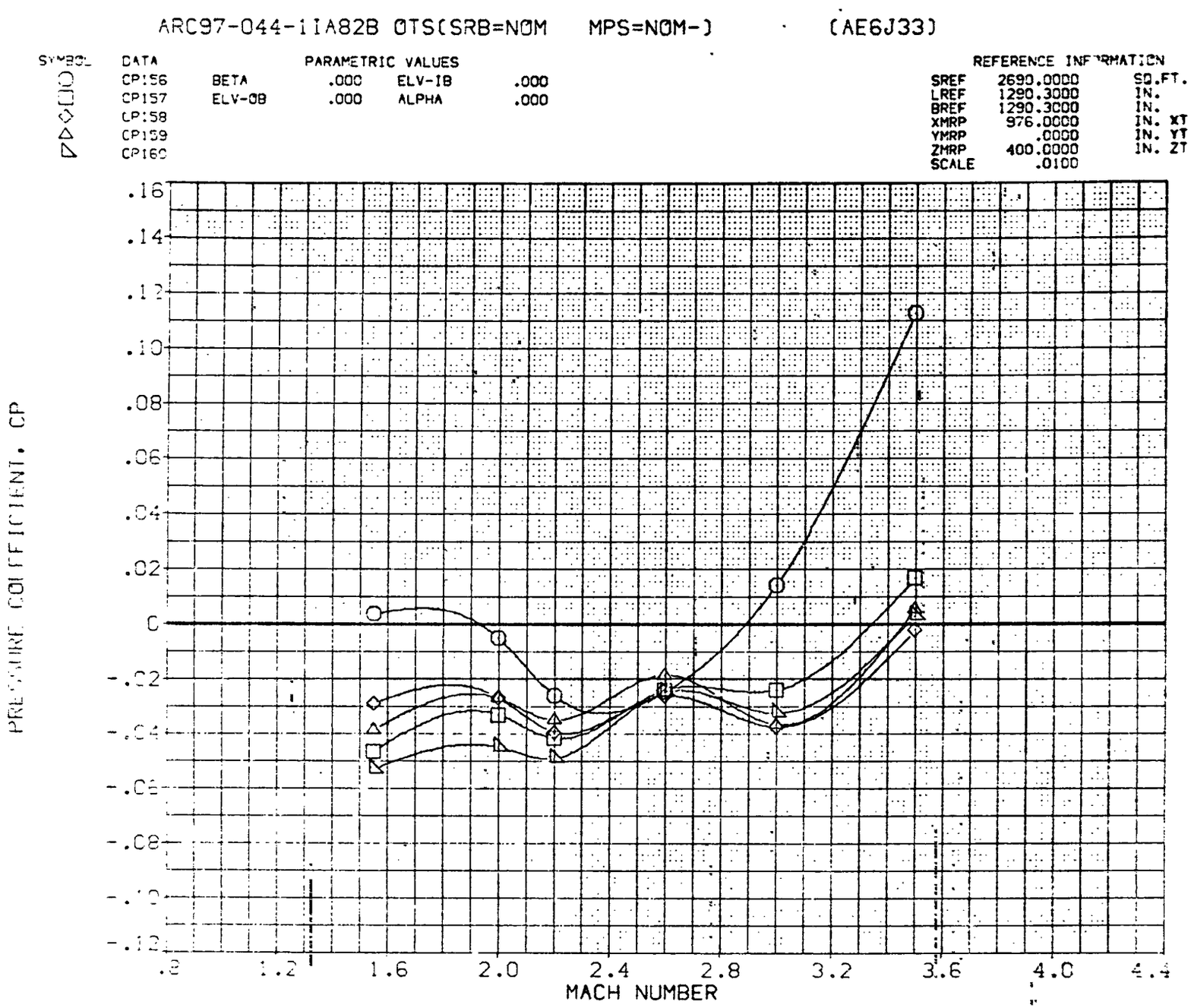


FIG. 94 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM-) (AE6J33)

SYMBOL	DATA
○	CP156.
□	CP157
◇	CP158.
△	CP159
◺	CP160

PARAMETRIC VALUES

BETA	4.000	ELV-IB	.000	
ELV-OB	.000	ALPHA	.000	

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

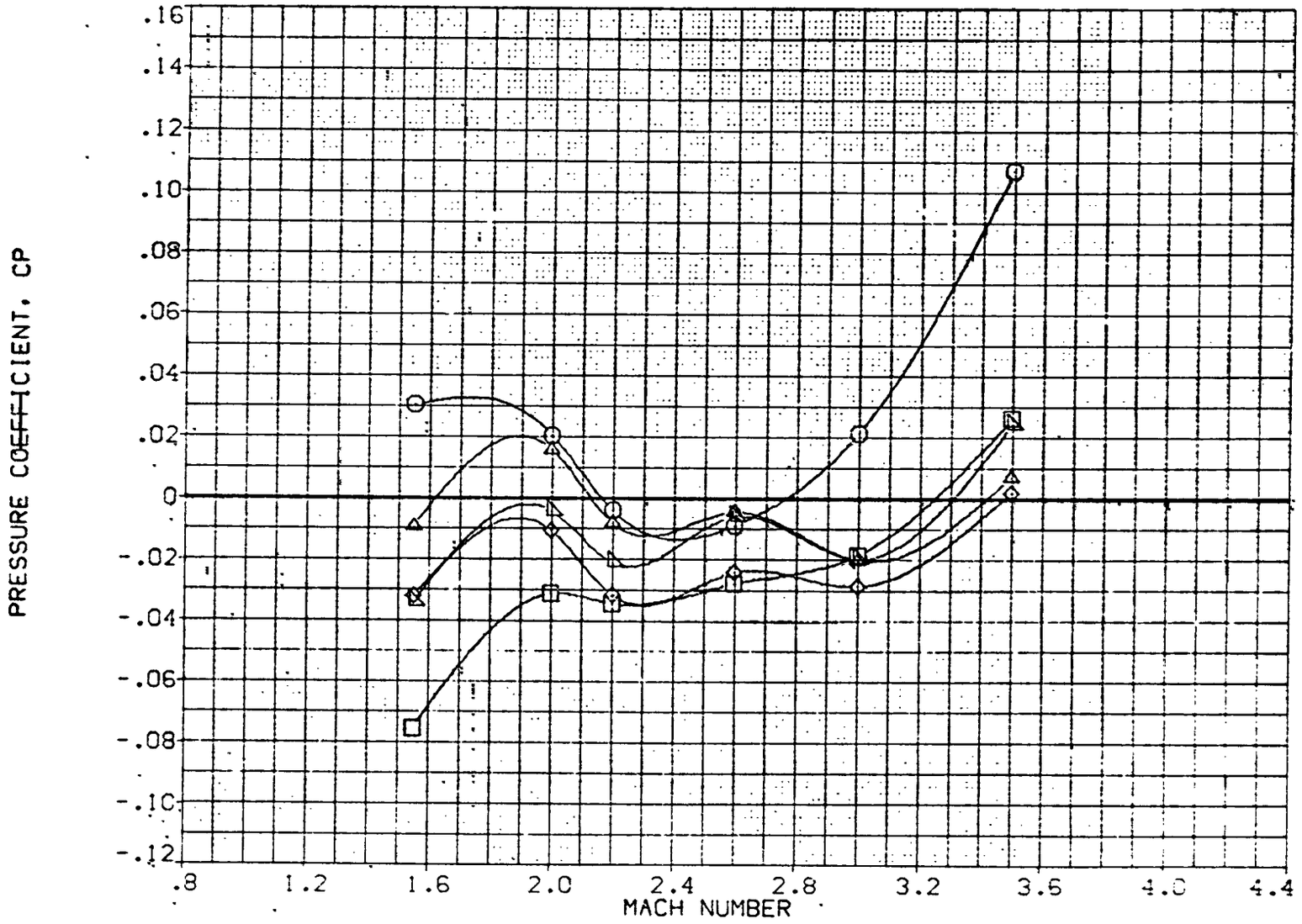


FIG. 94 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

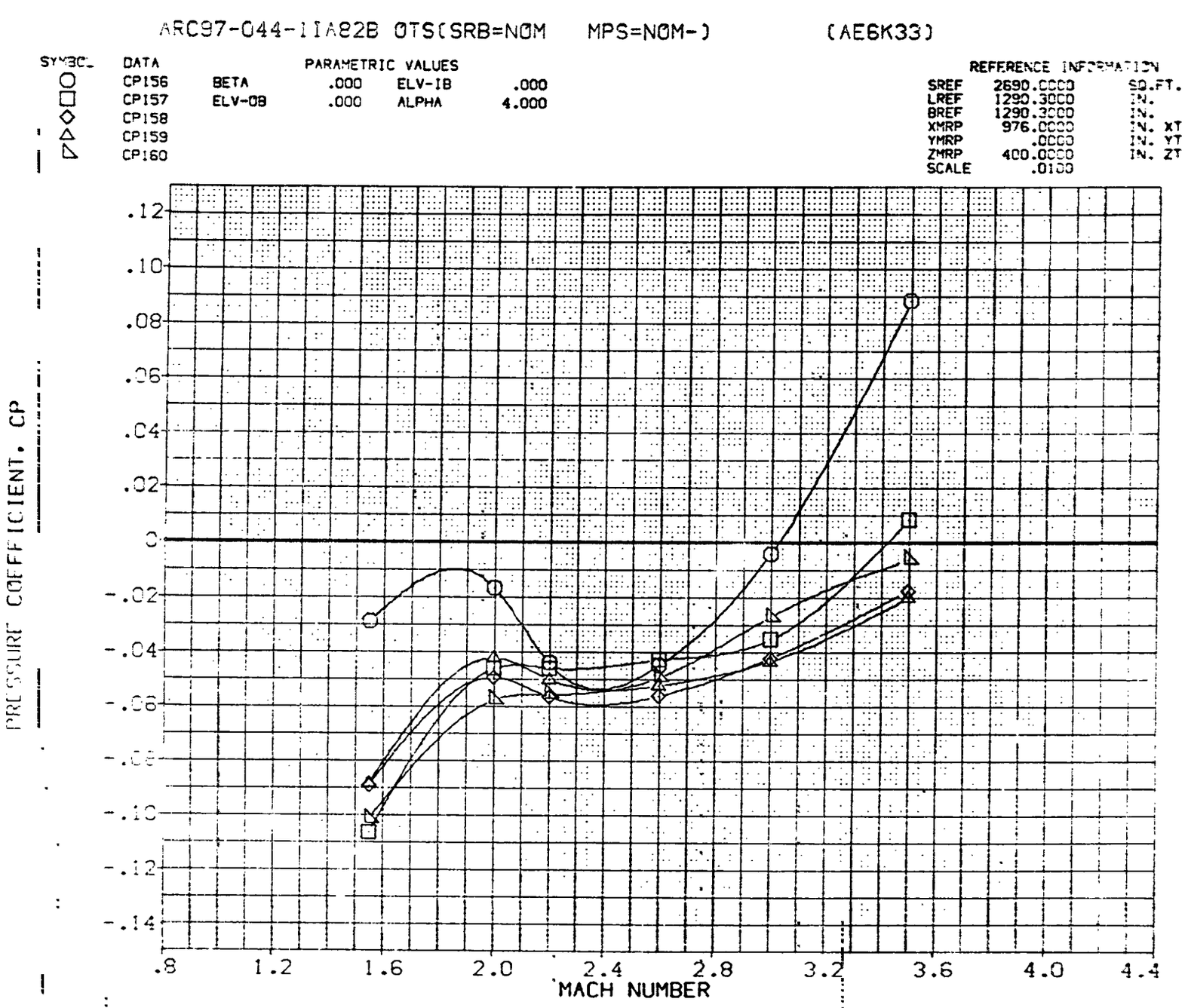


FIG. 94 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM-

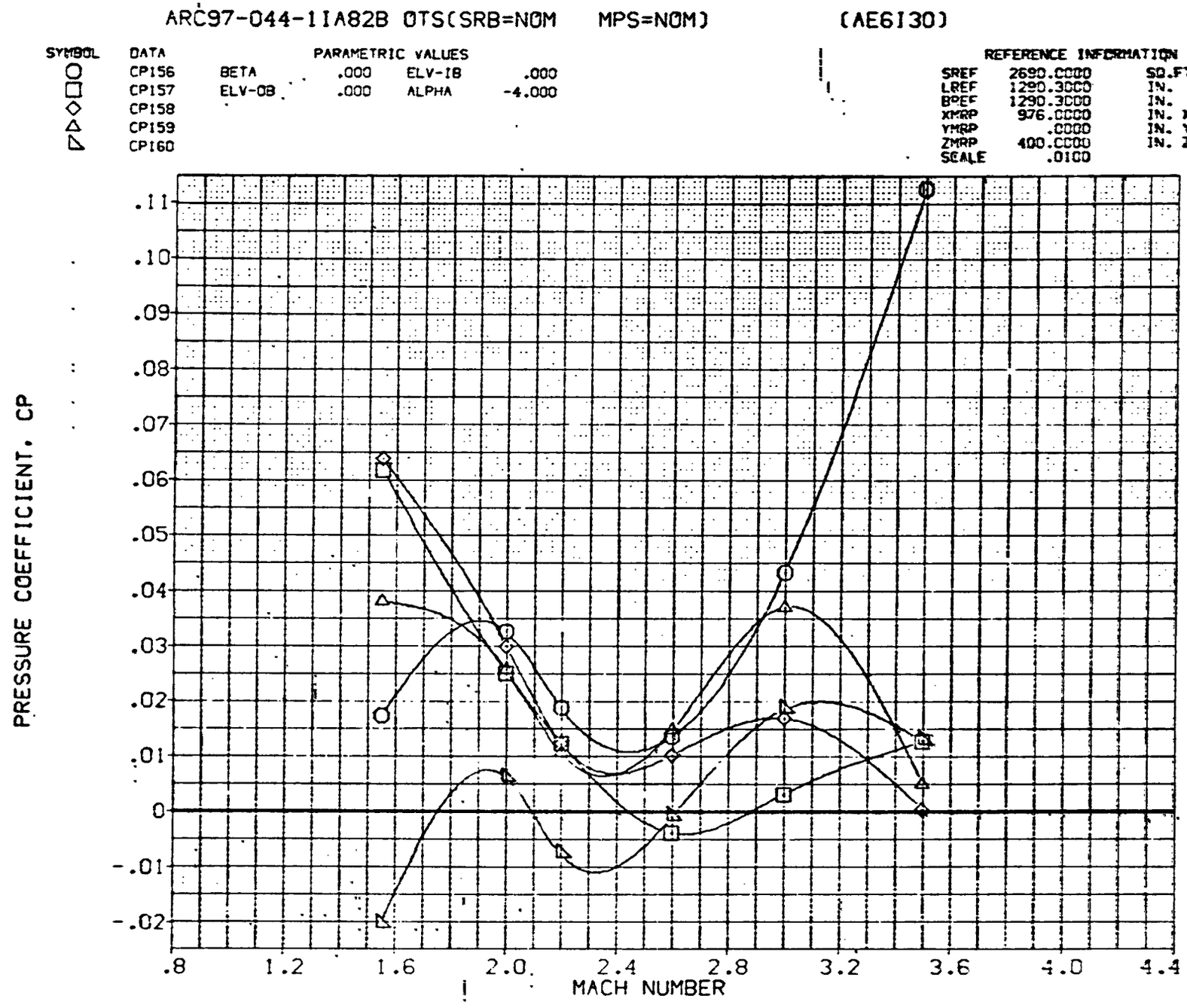


FIG. 95 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

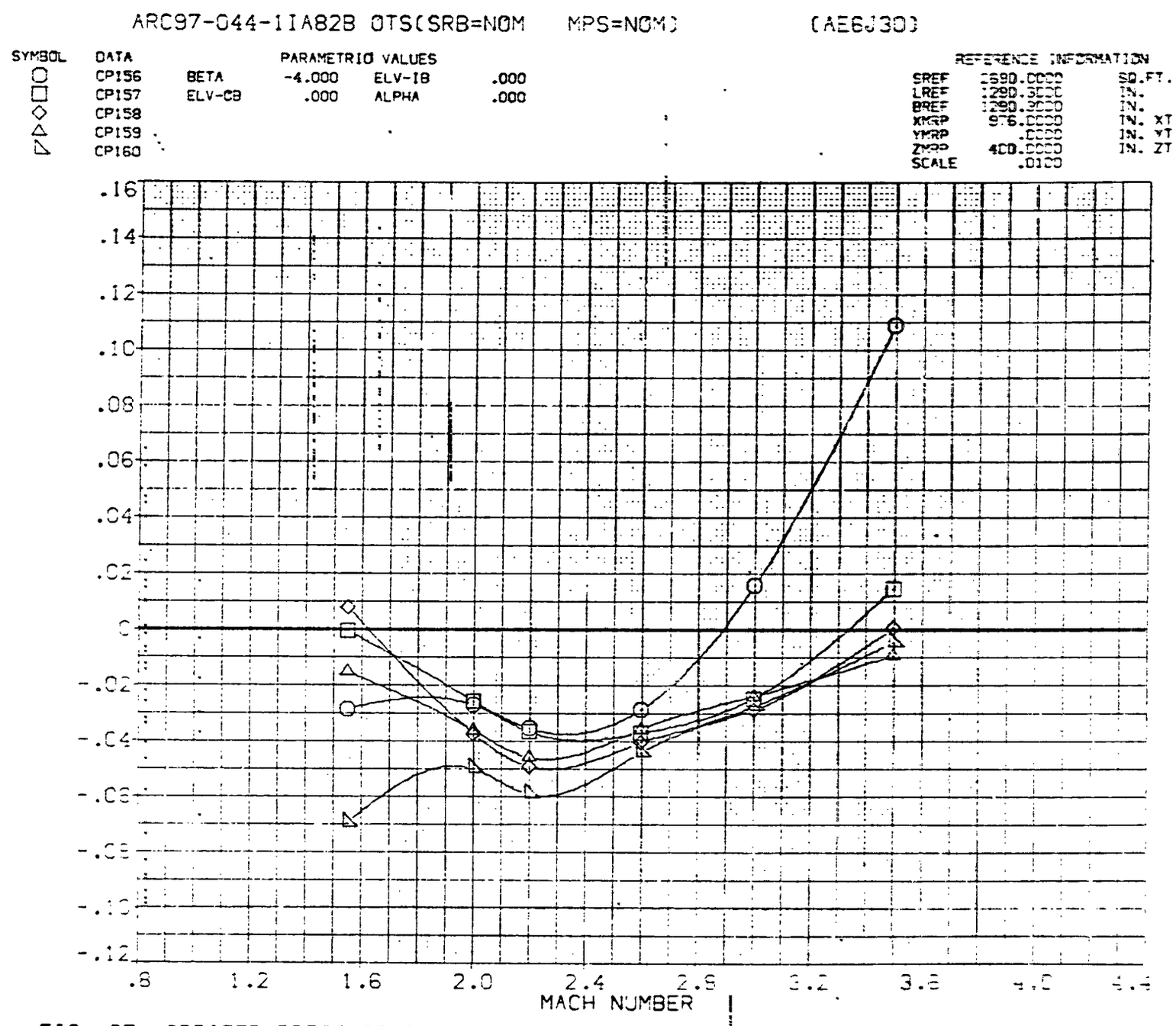


FIG. 95 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

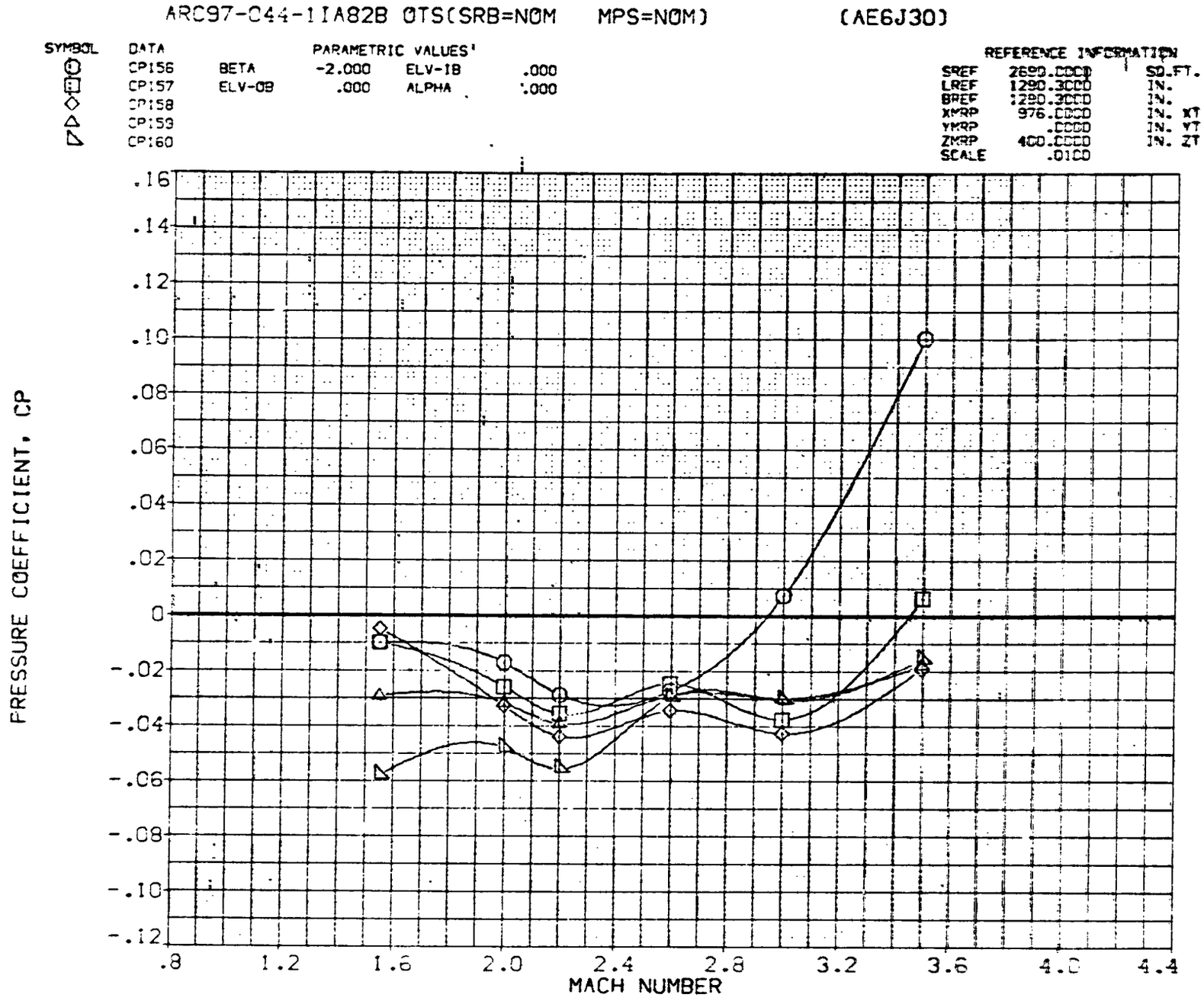


FIG. 95 ØRBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NØM, MPS=NØM

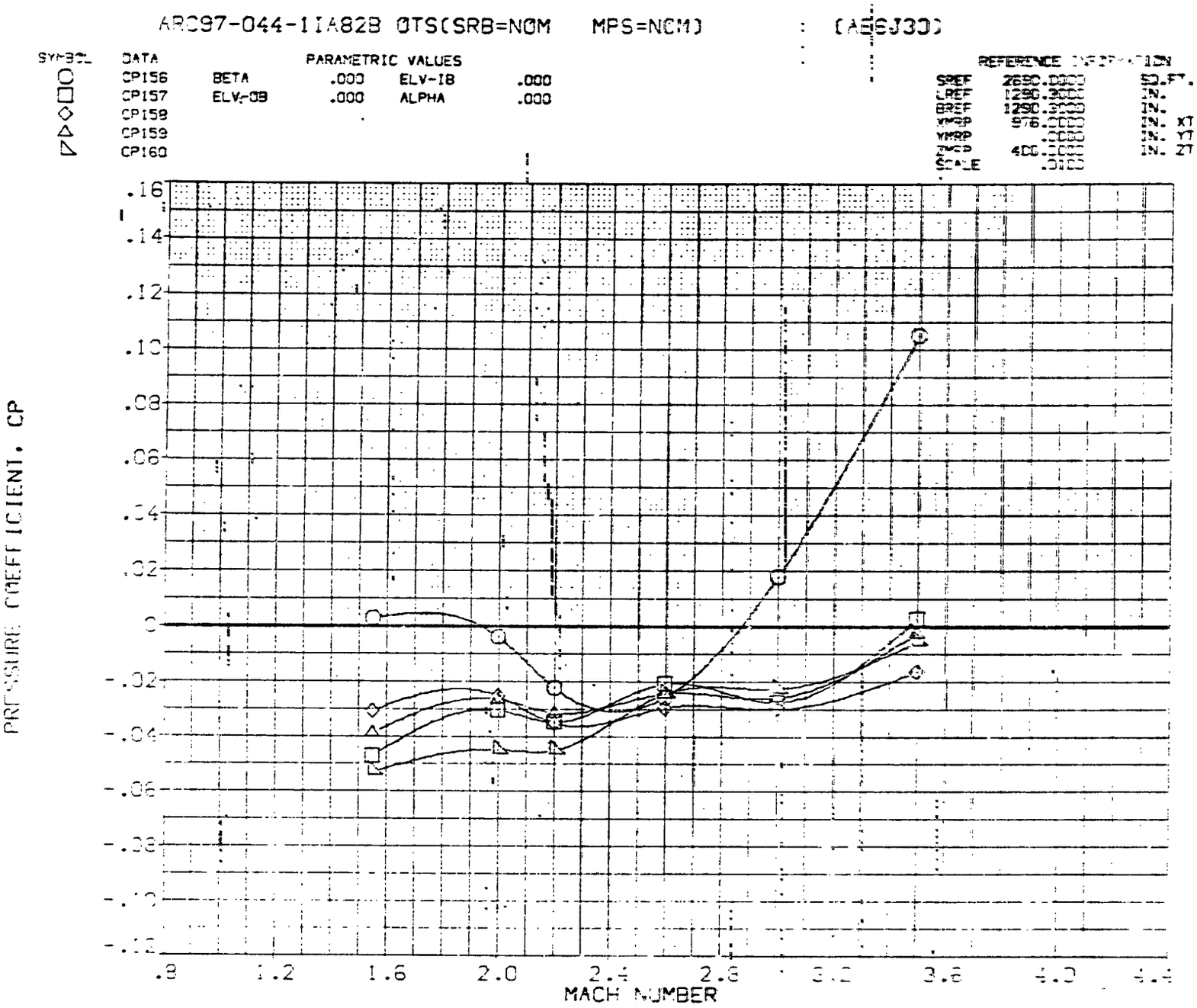


FIG. 95 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

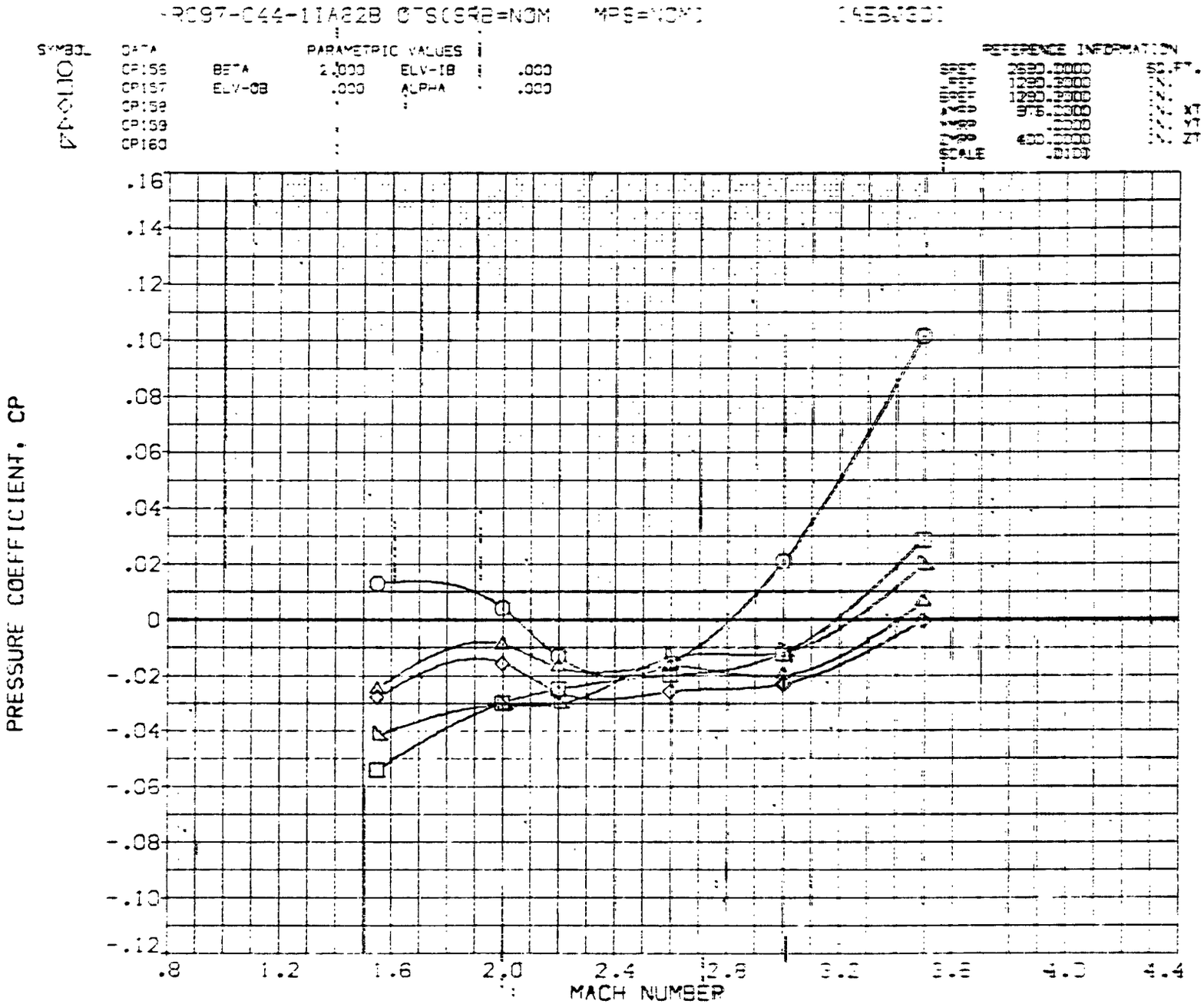


FIG. 95 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

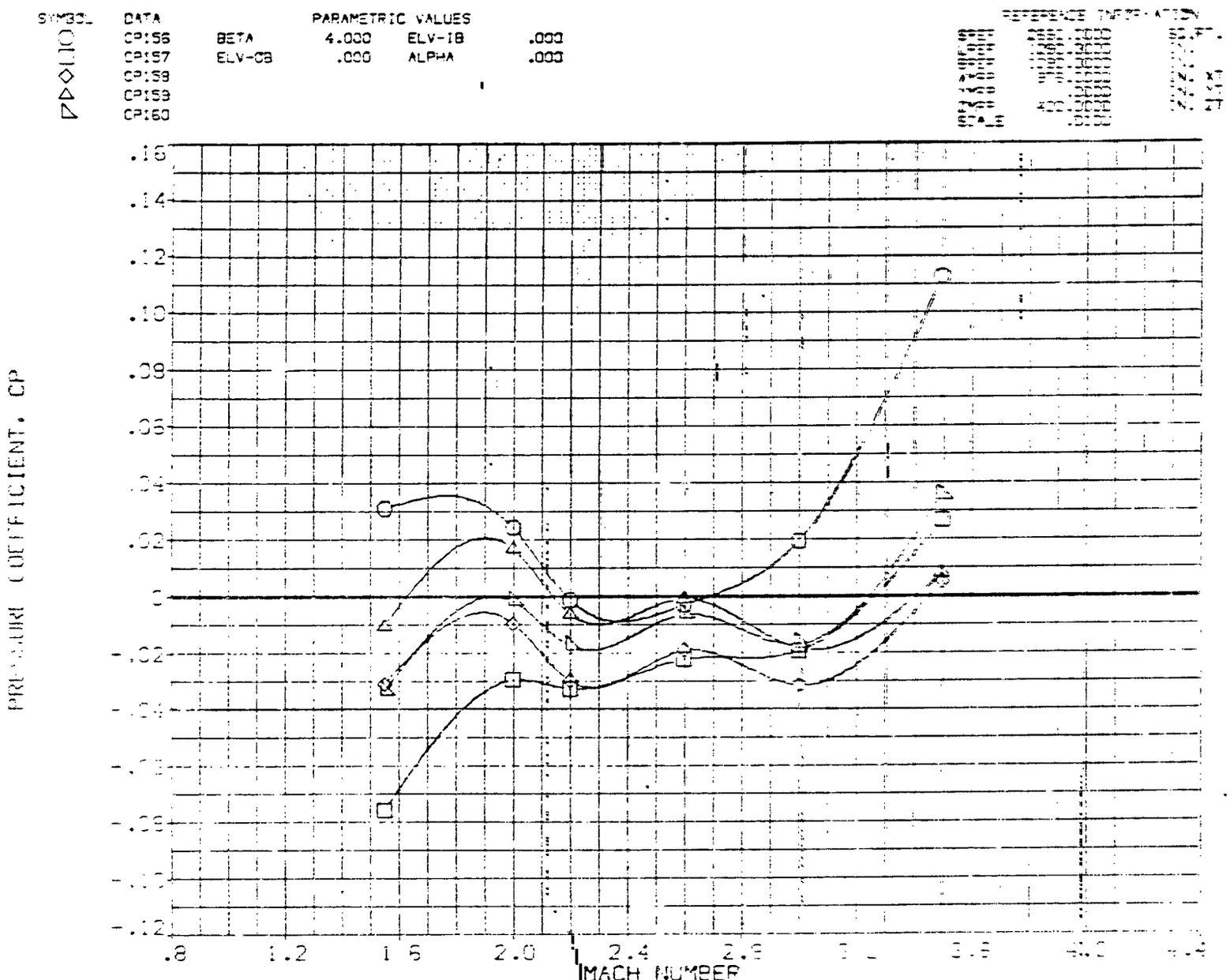


FIG. 95 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM. MPS=NOM

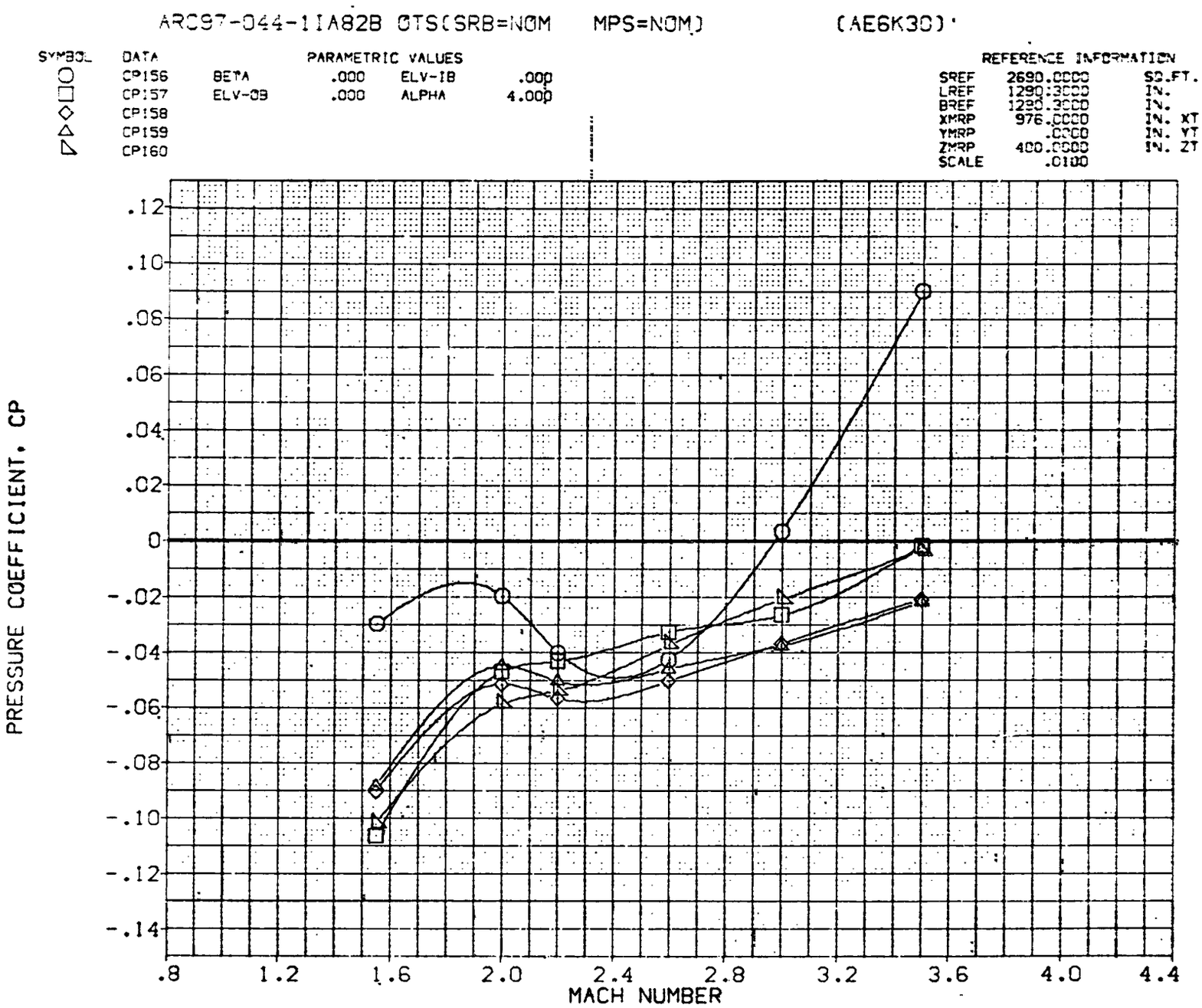


FIG. 95 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM

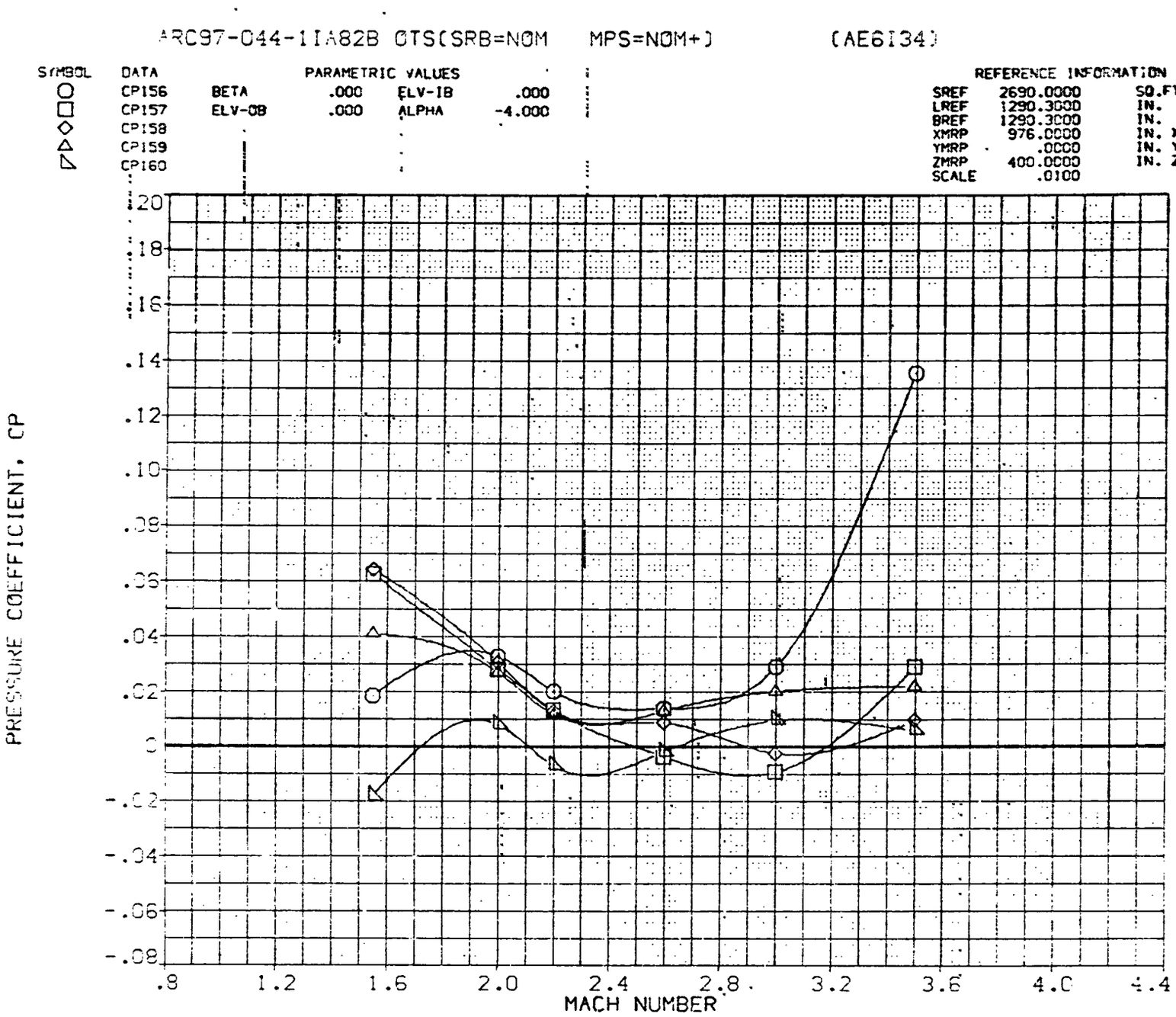


FIG. 96 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

ARC97-044-1IA82B OTS(SRB=NOM , MPS=NOM+); (AE6J34)

SYMBOL	DATA
○	CP156
□	CP157
◇	CP158
△	CP159
▷	CP160

PARAMETRIC VALUES

BETA	-4.000	ELV-IB	.000
ELV-OB	.000	ALPHA	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

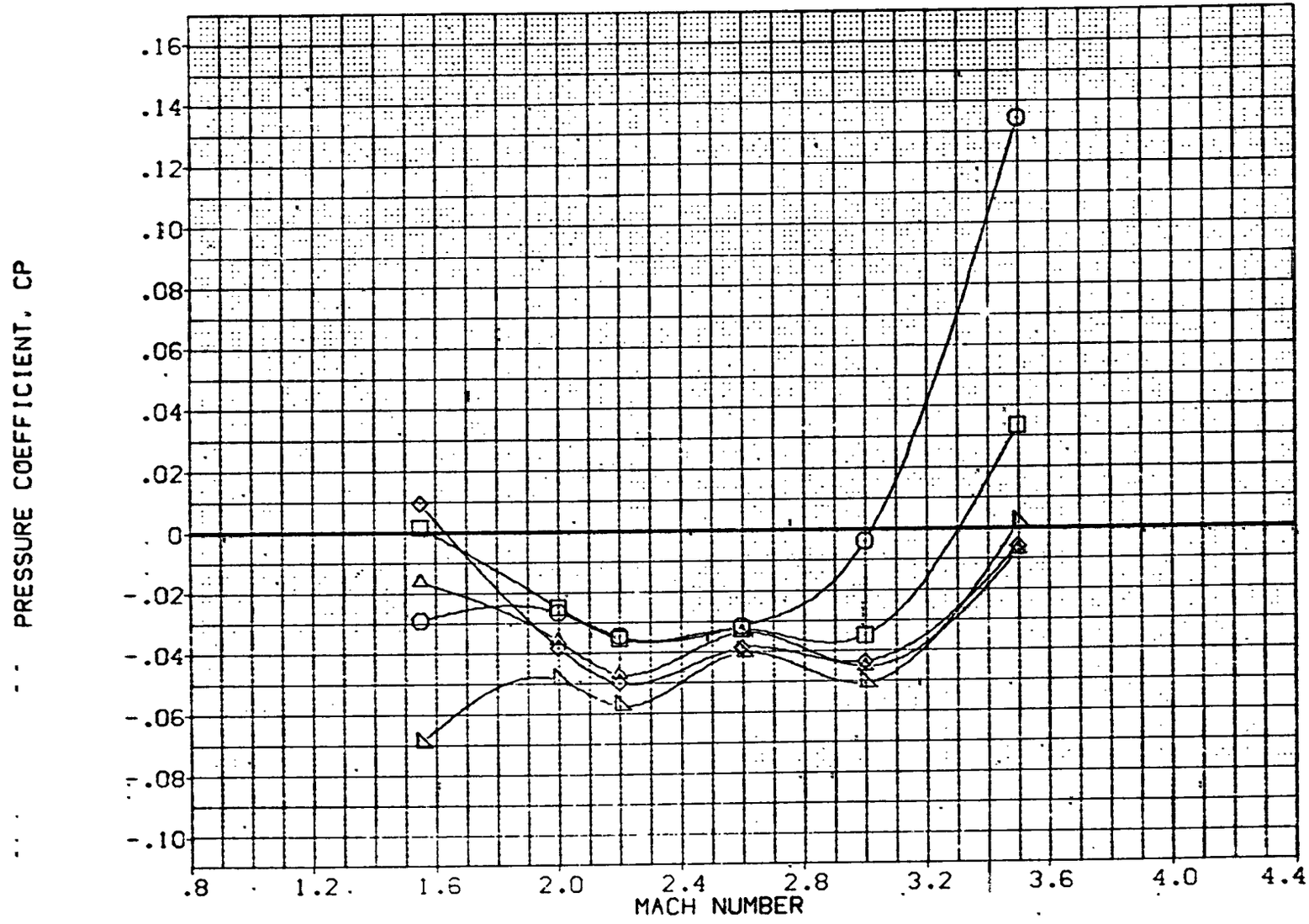


FIG. 96 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP156	BETA	.000	ELV-IB	.000
□	CP157	ELV-OB	.000	ALPHA	.000
◇	CP158				
△	CP159				
▽	CP160				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

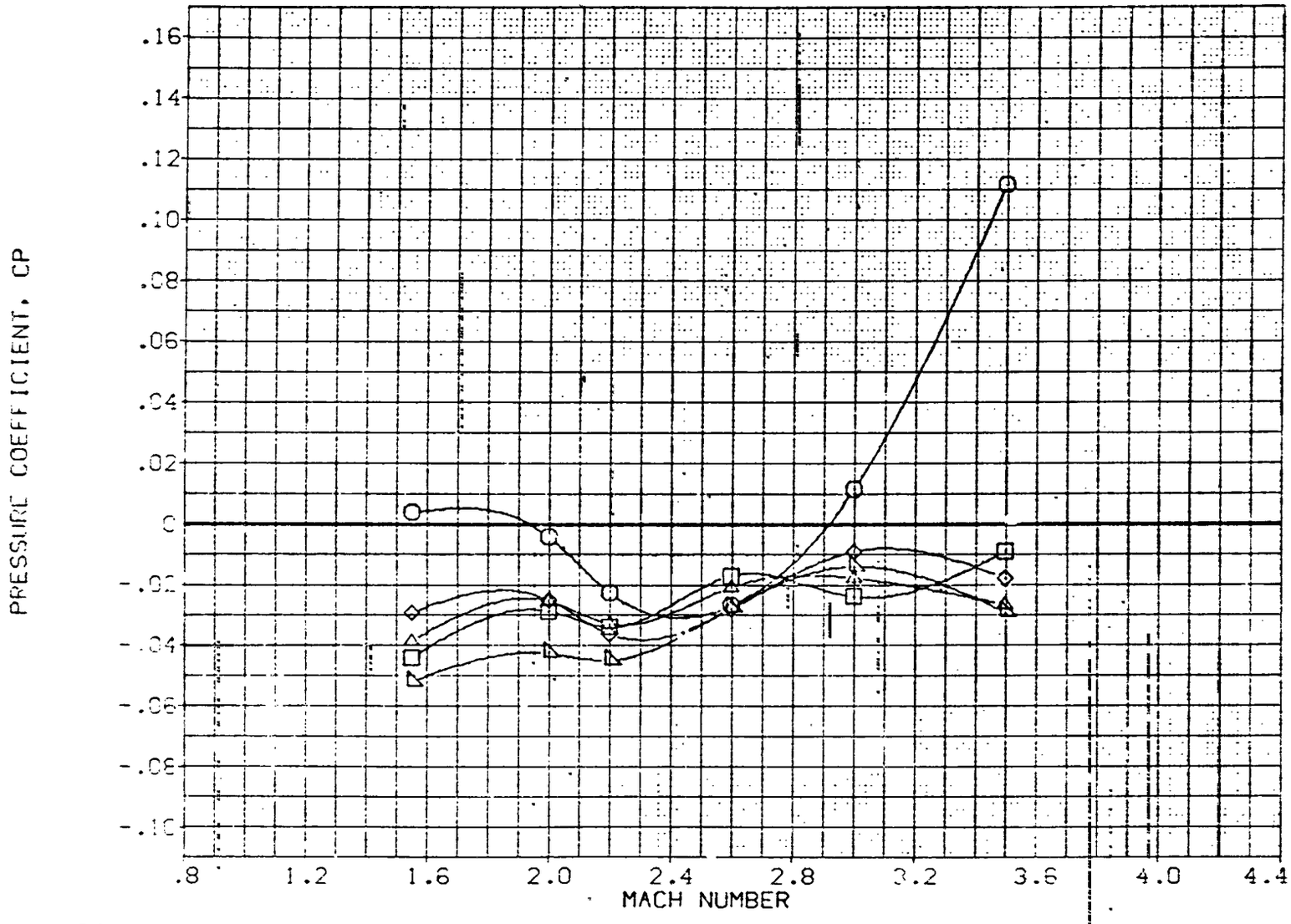


FIG. 96 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM+) (AE6J34)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP156	BETA	4.000	ELV-IB	.000
□	CP157	ELV-OB	.000	ALPHA	.000
◇	CP158				
△	CP159				
▽	CP160				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

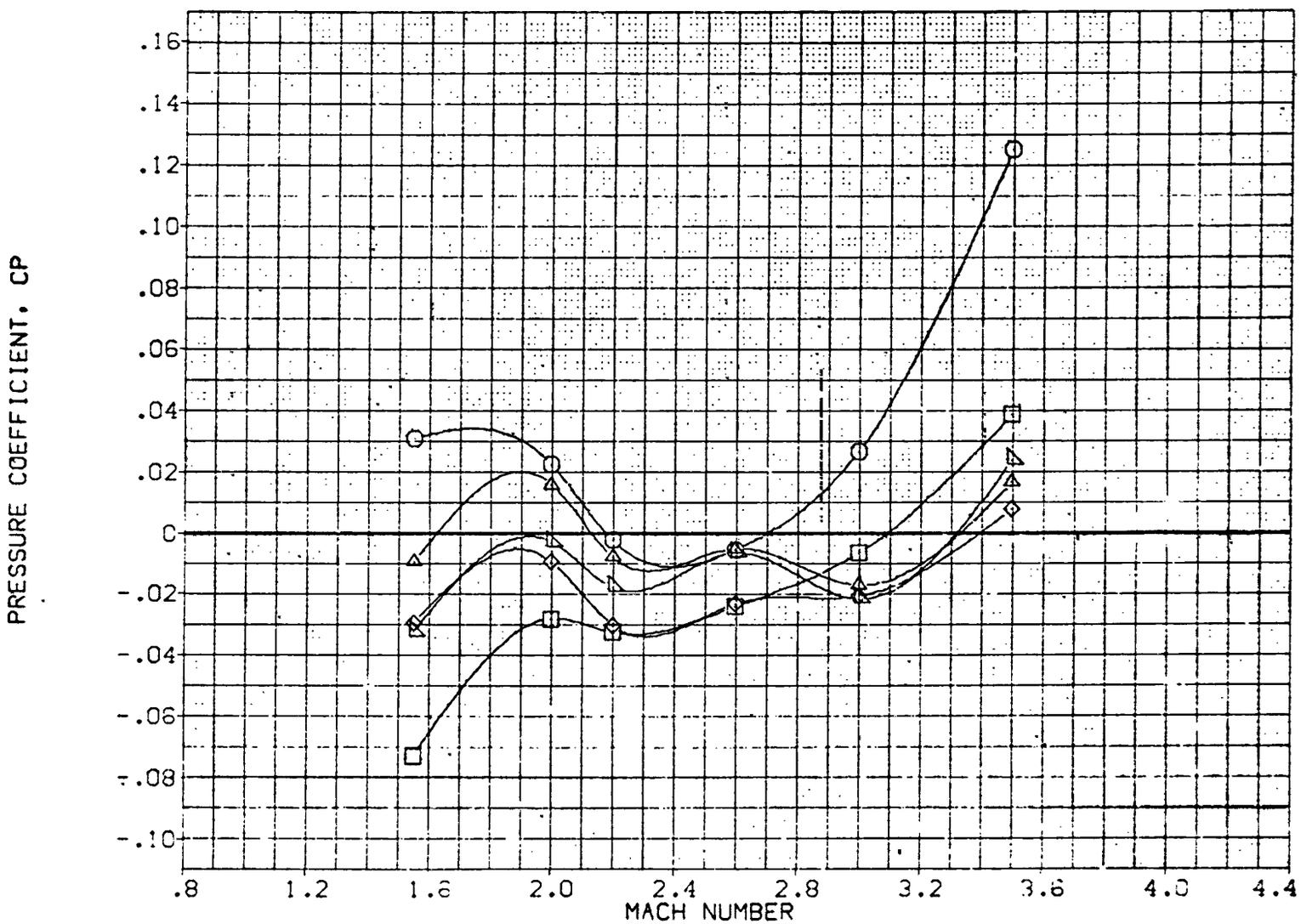


FIG. 96 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

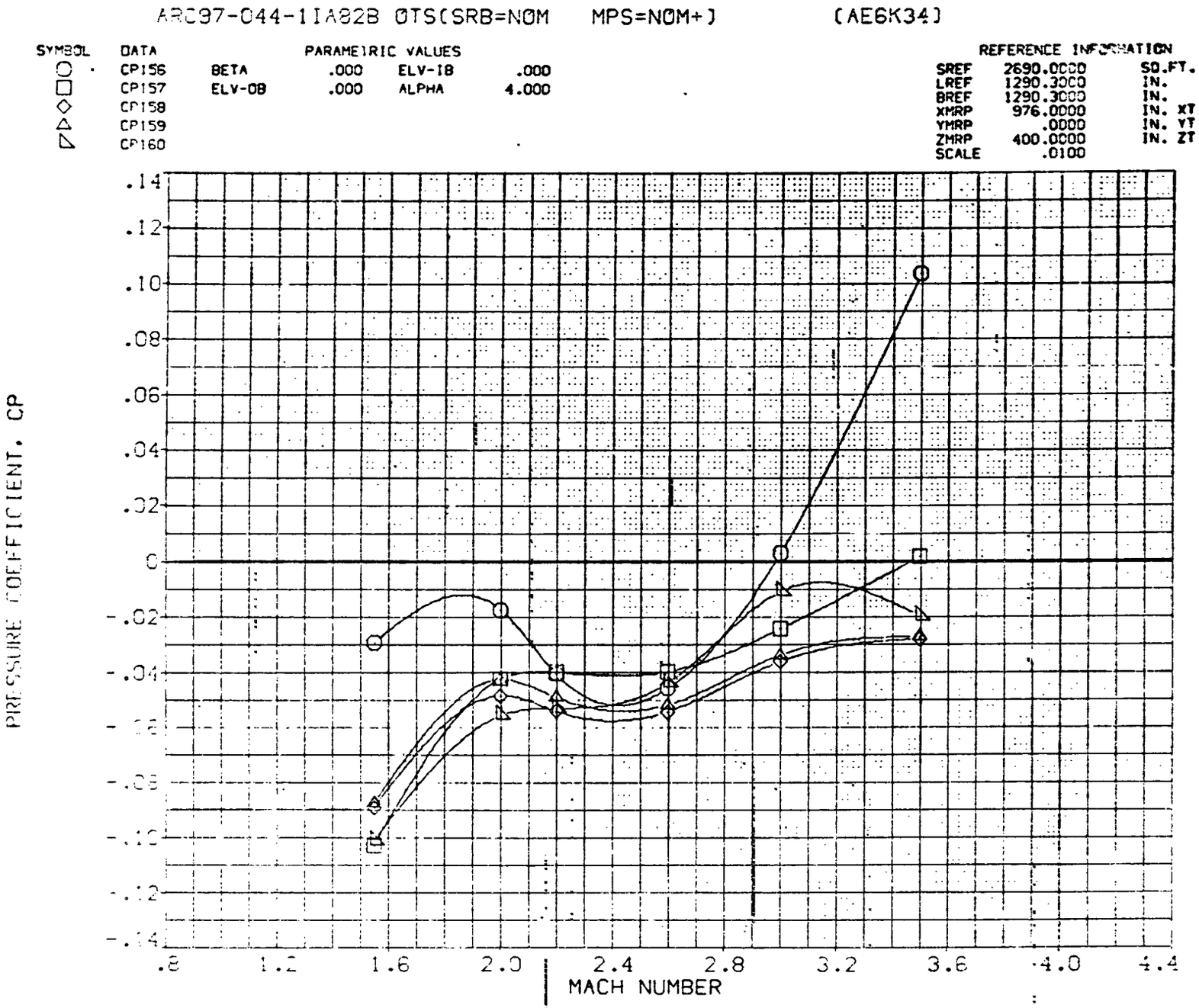


FIG. 96 ORBITER PRESSURE COEFFICIENTS(RIGHT) SRB=NOM, MPS=NOM+

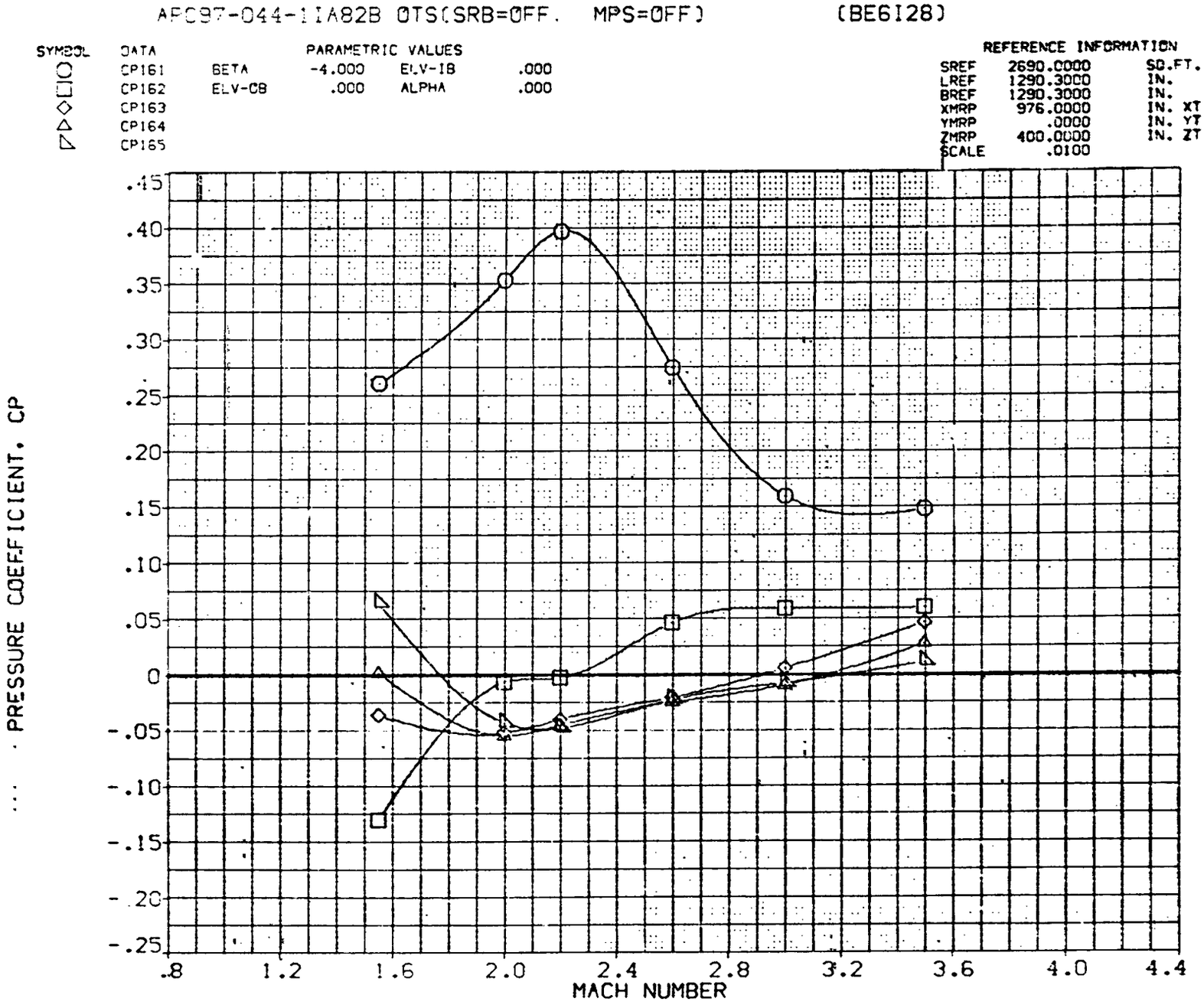


FIG. 97 : ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

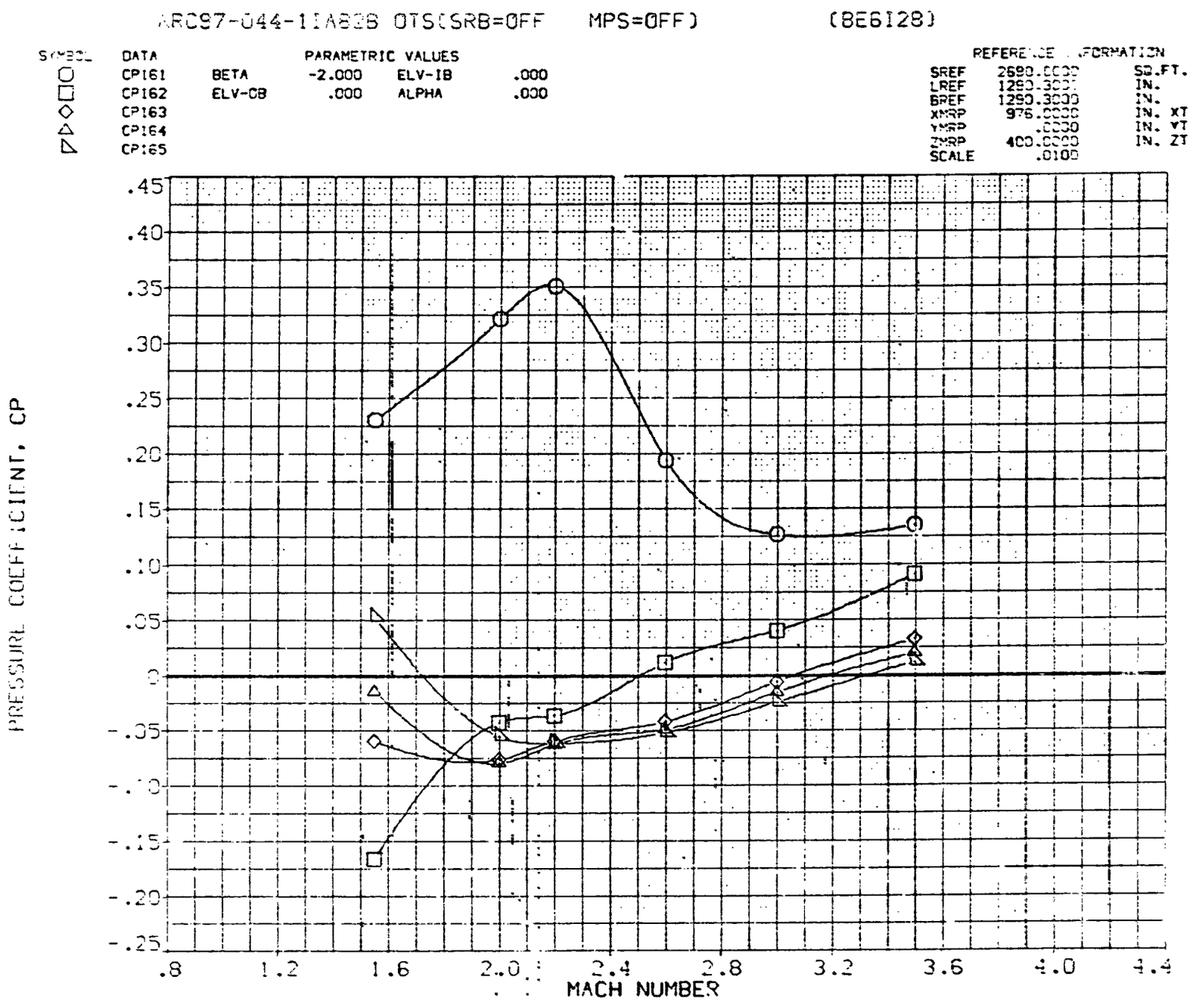


FIG. 97 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

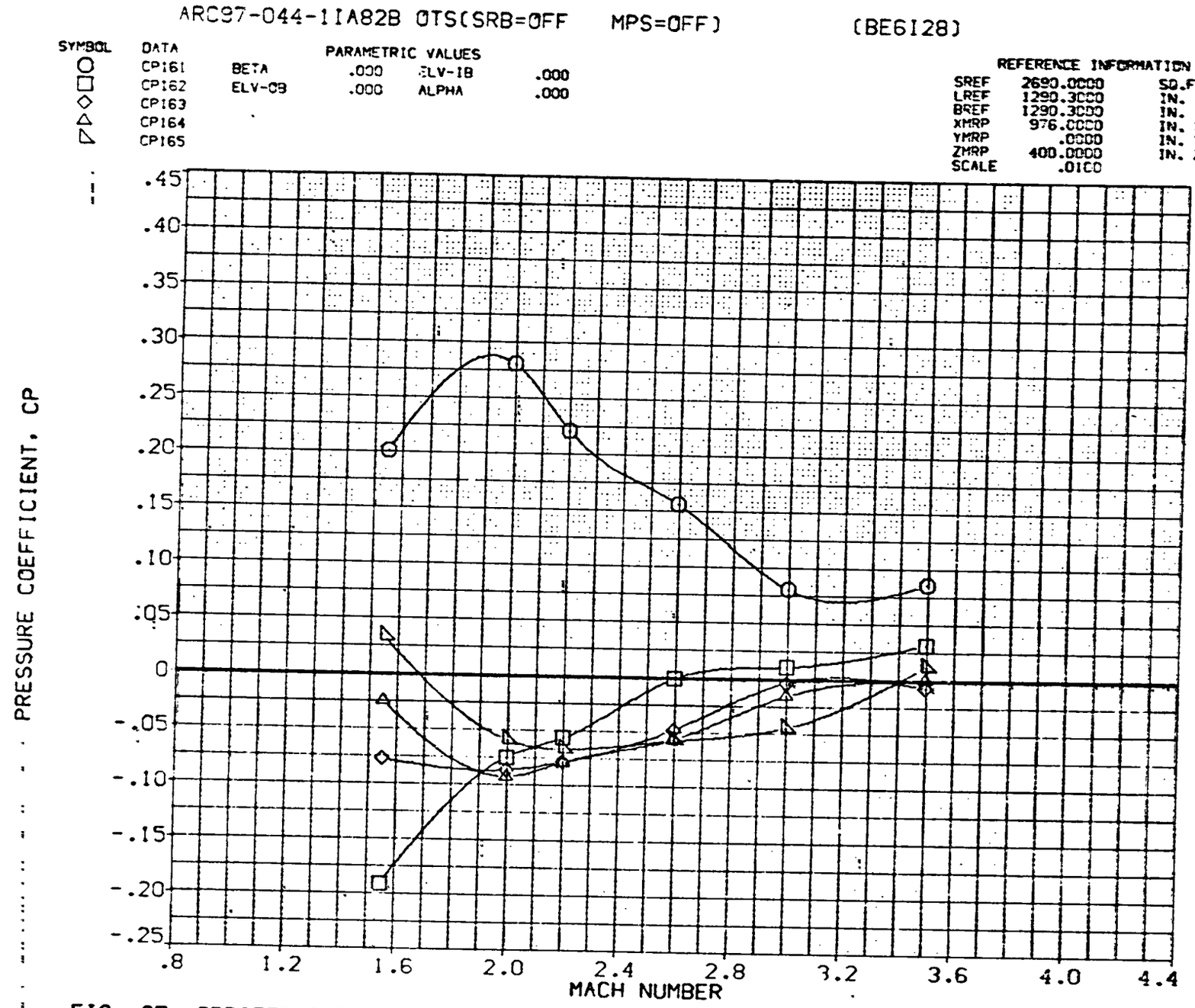


FIG. 97 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

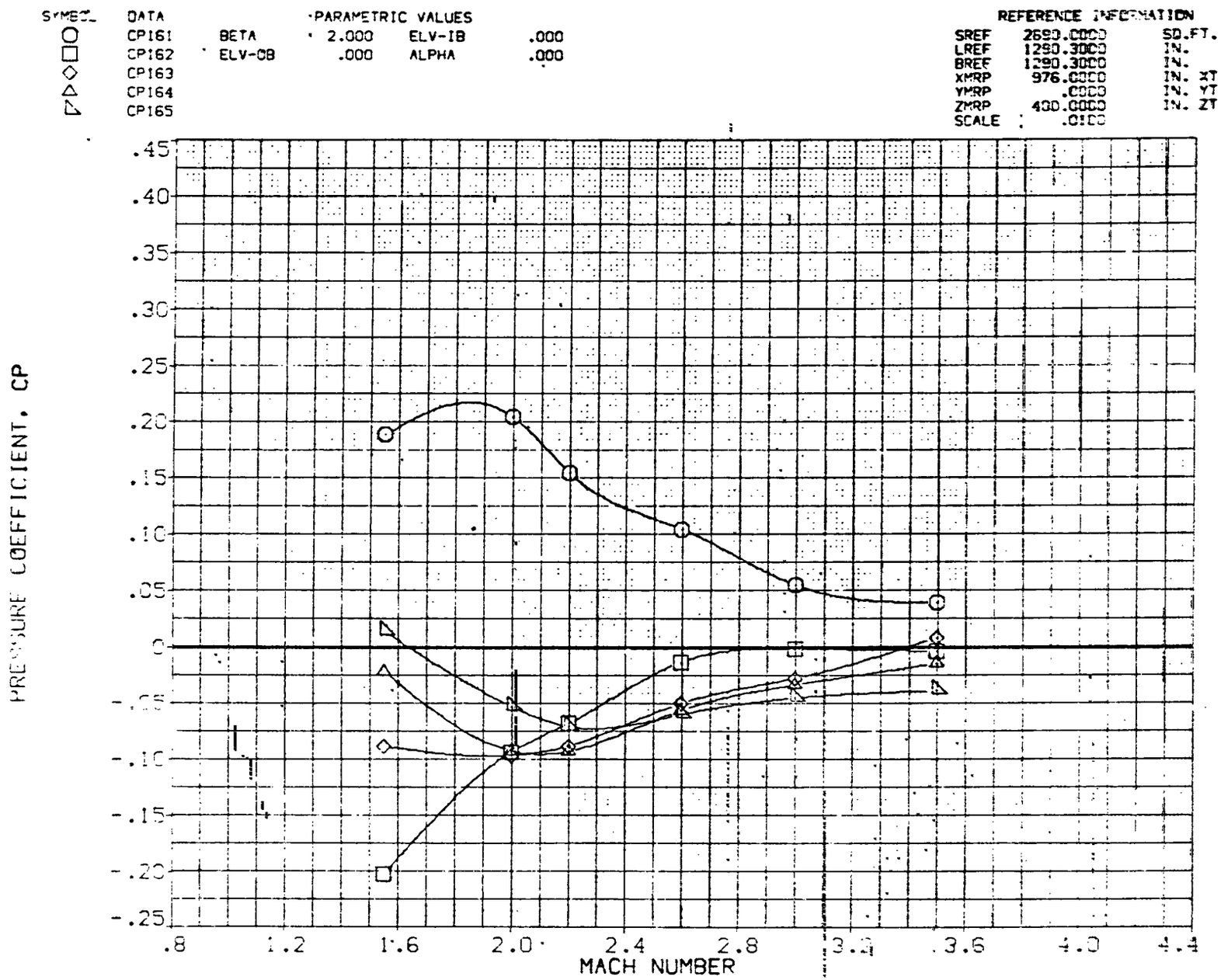


FIG. 97 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

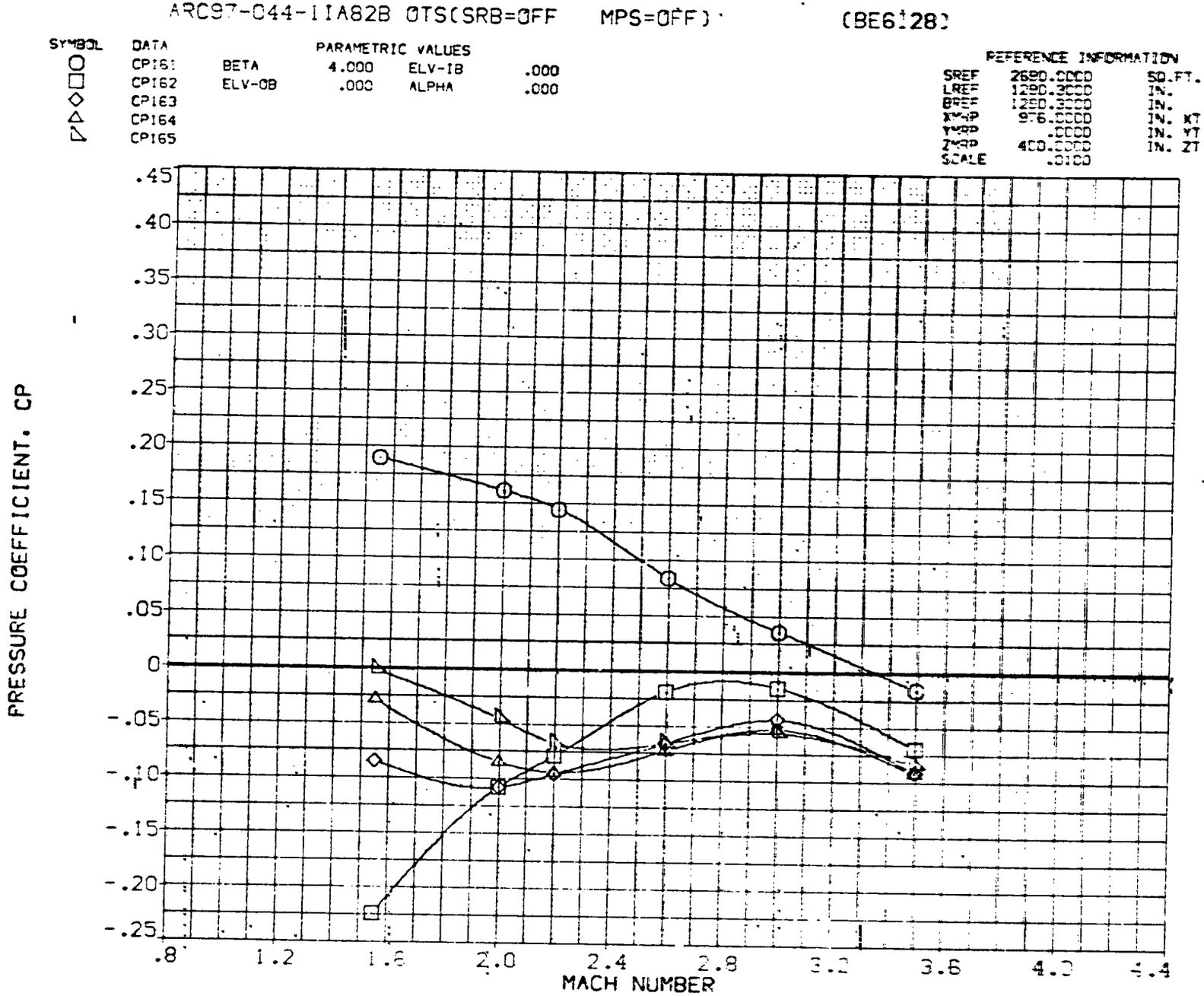


FIG. 97 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

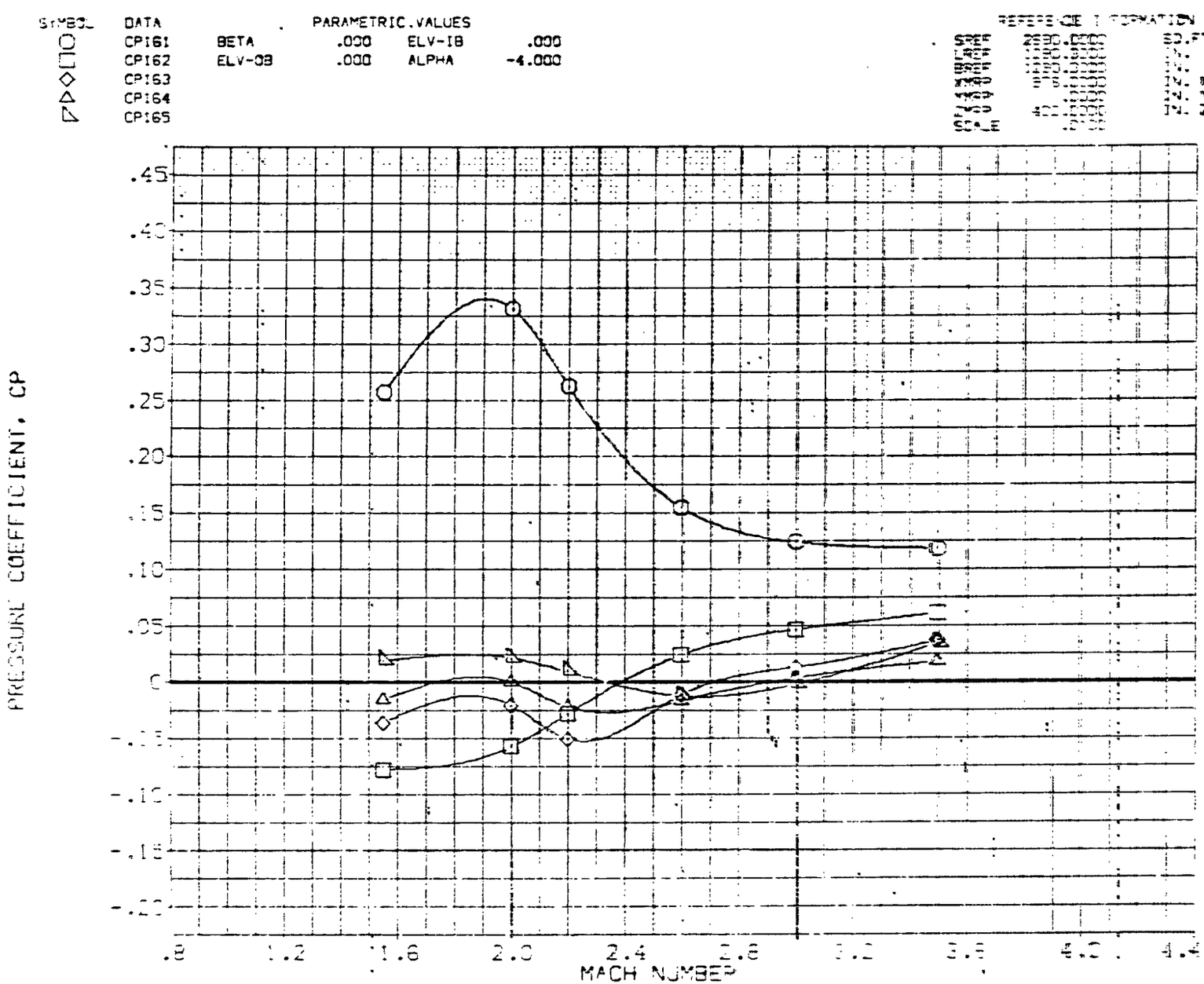


FIG. 97 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

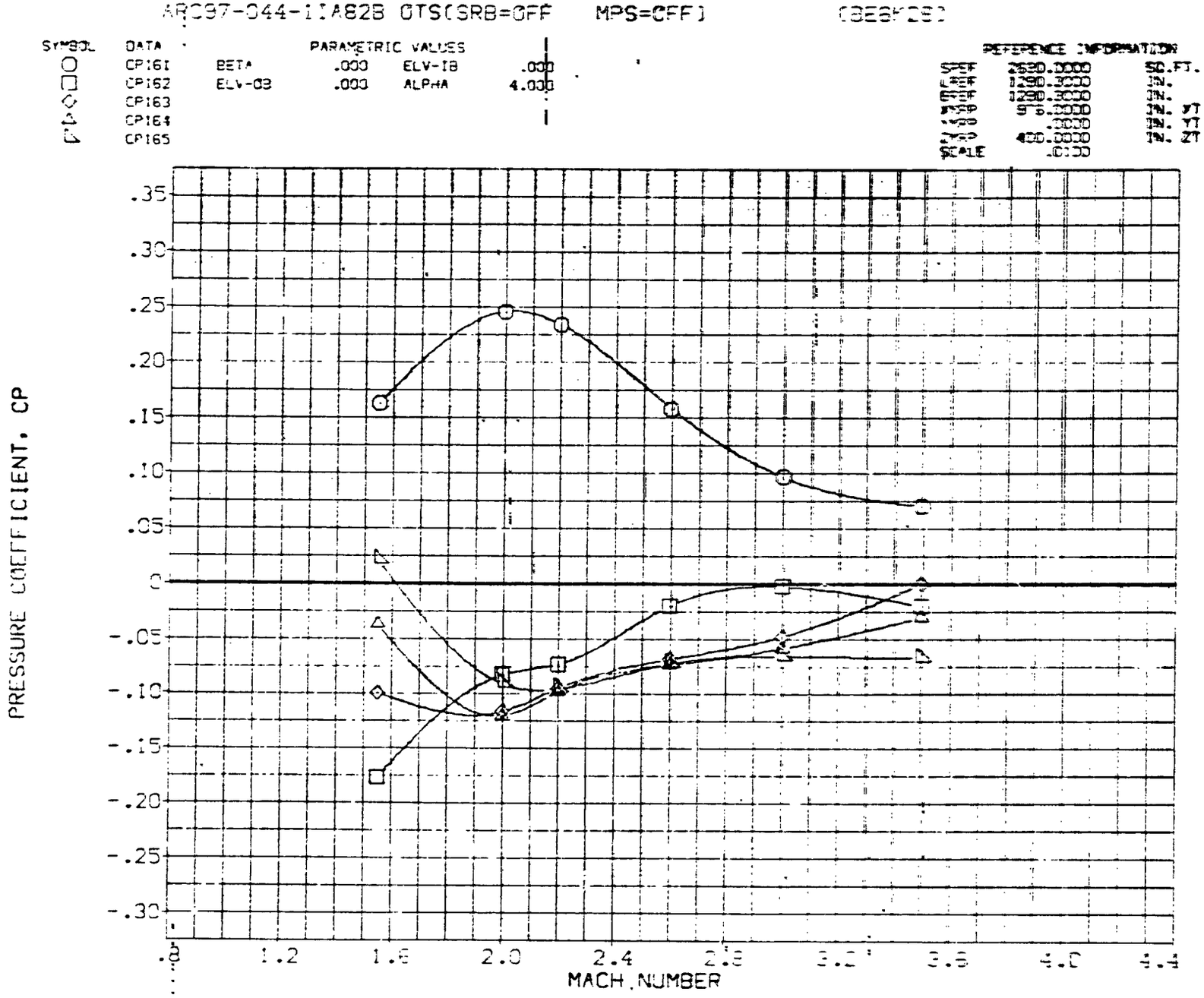


FIG. 97 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

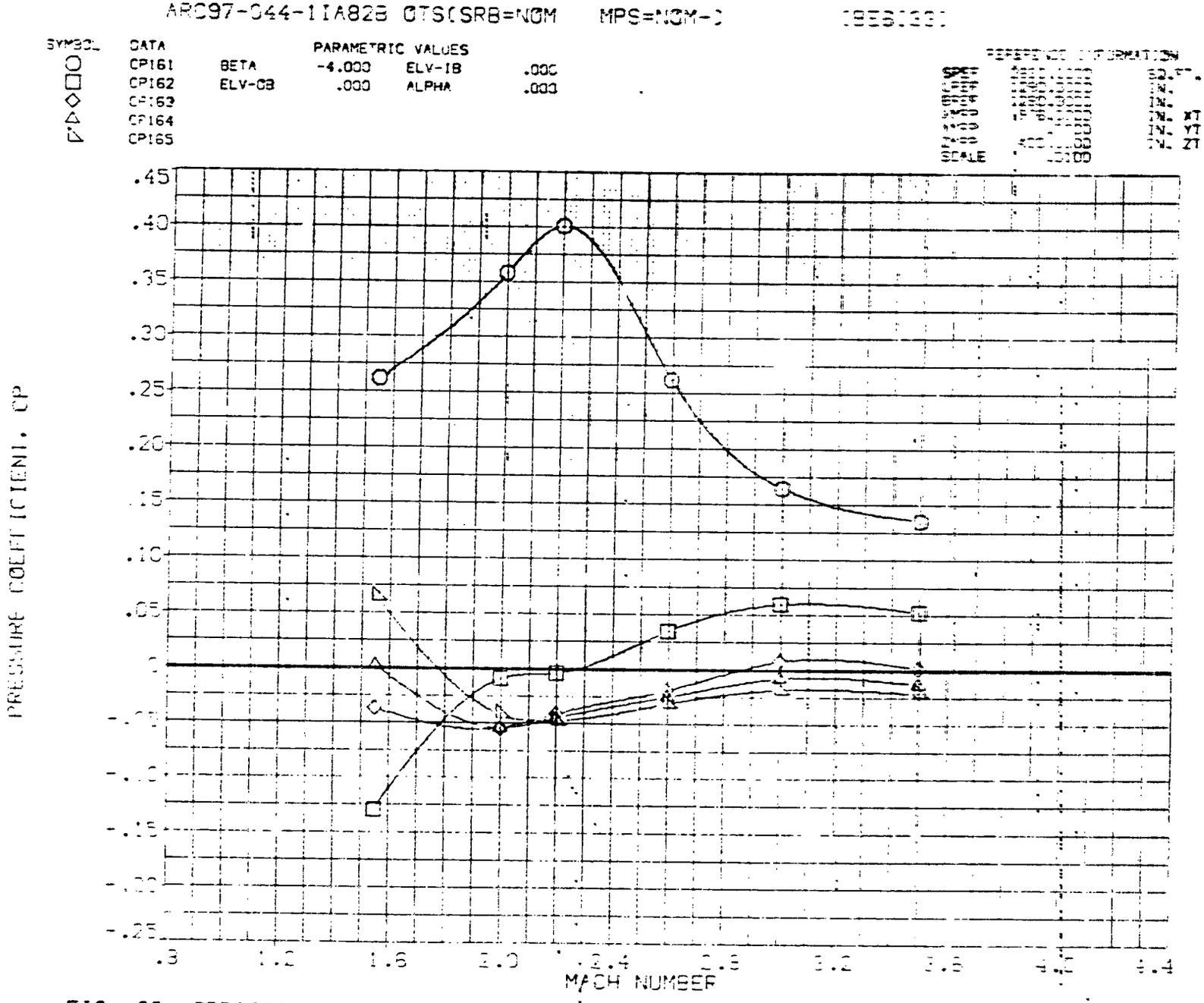


FIG. 98 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

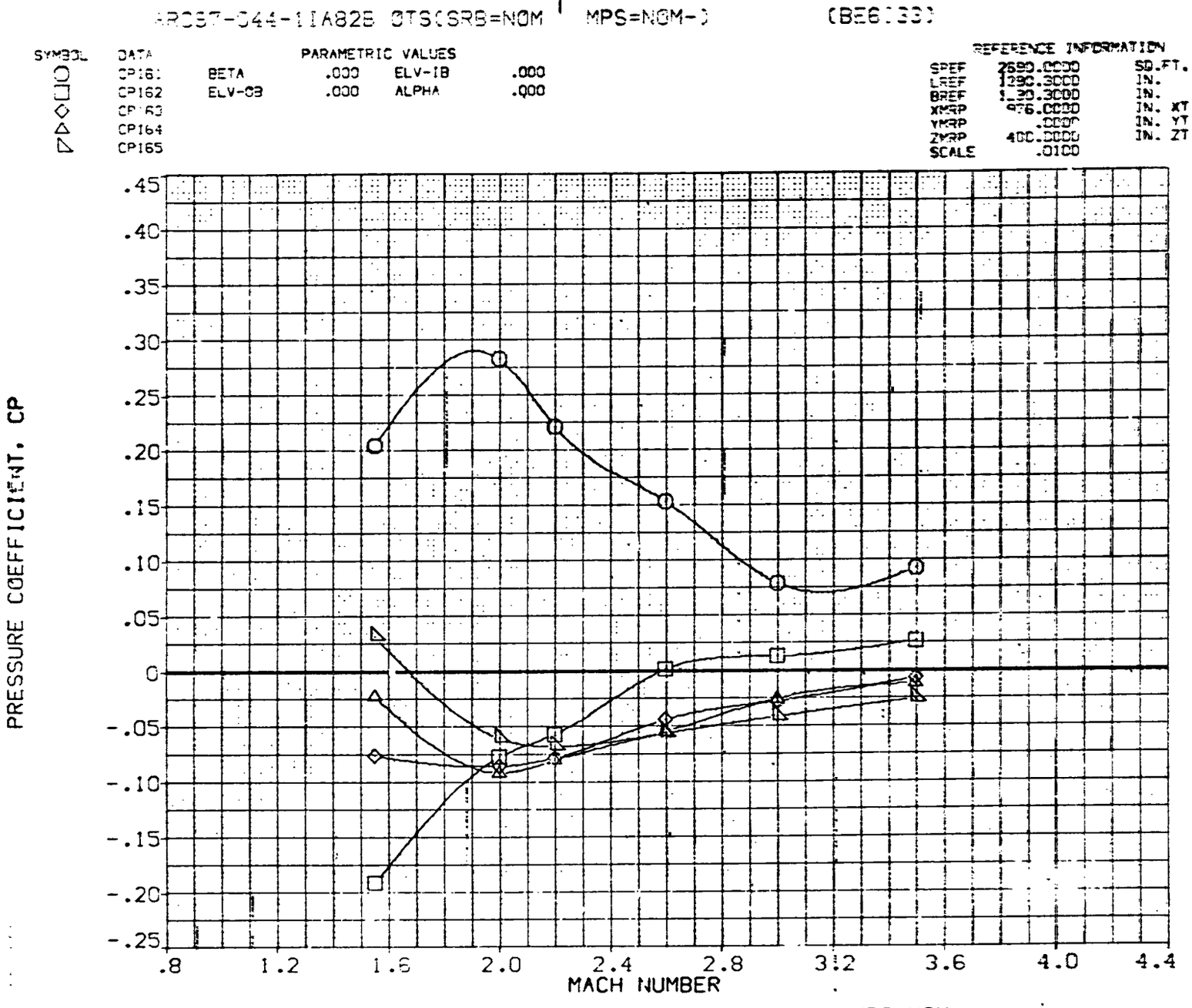


FIG. 98 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

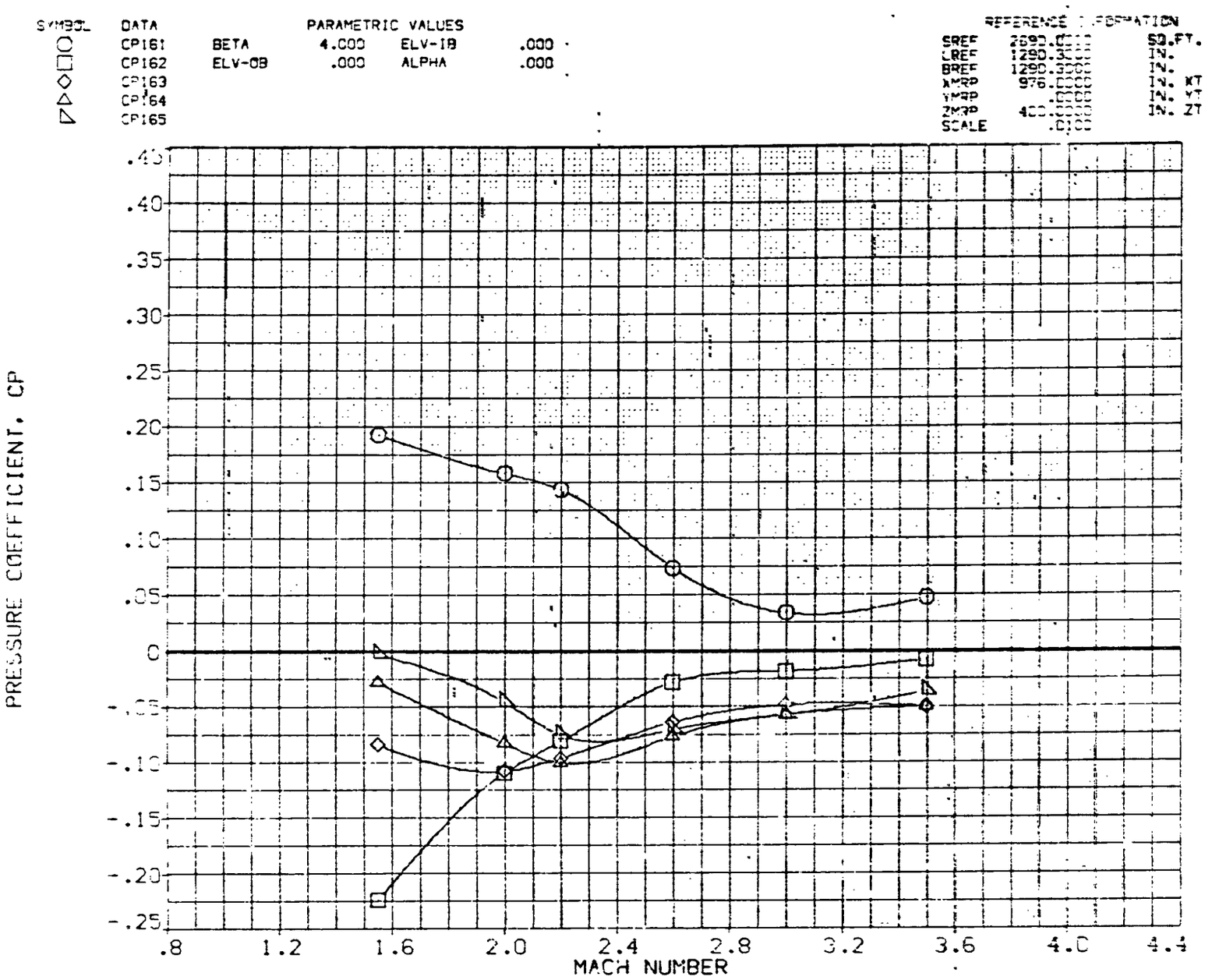


FIG. 98 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

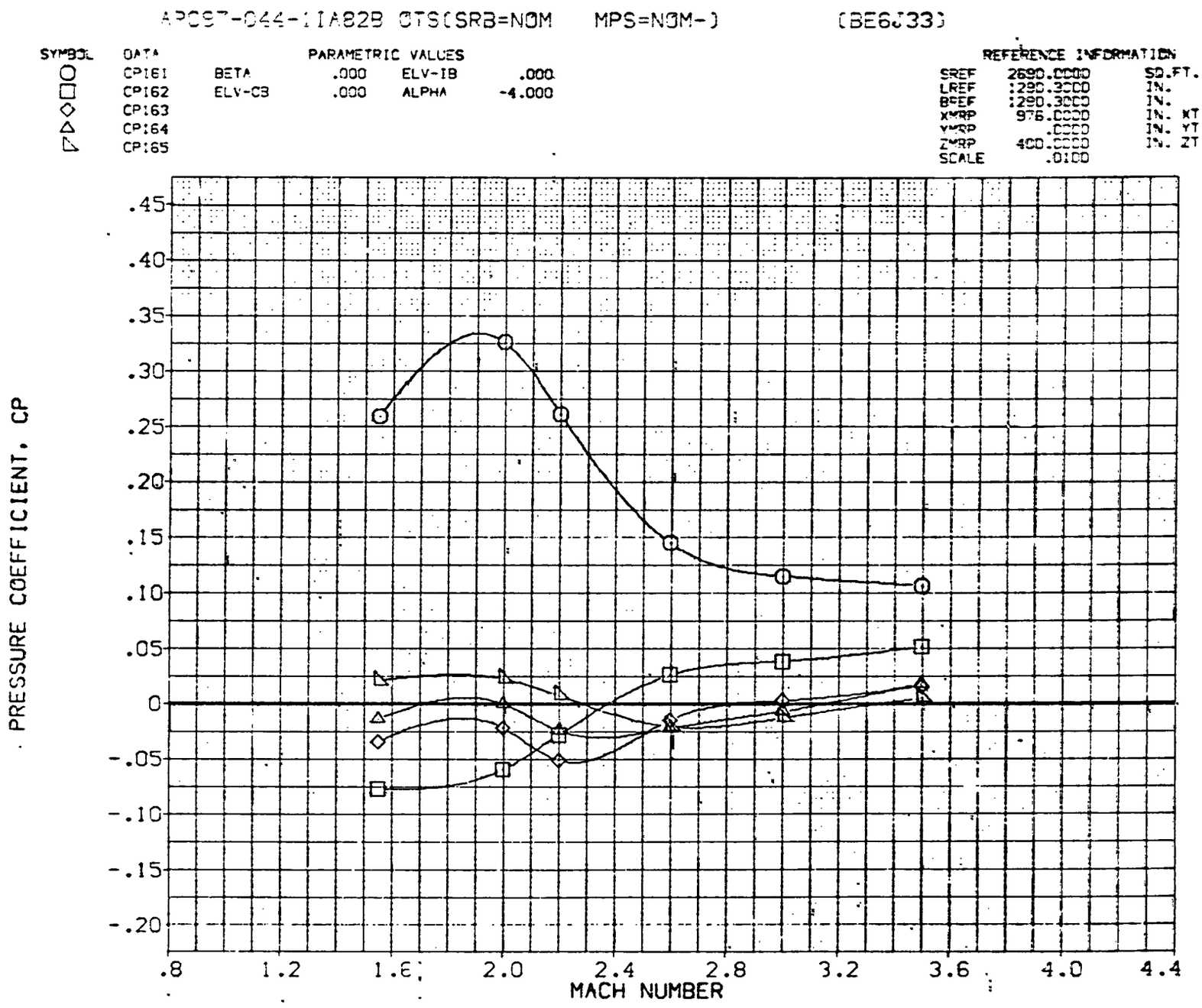


FIG. 98 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

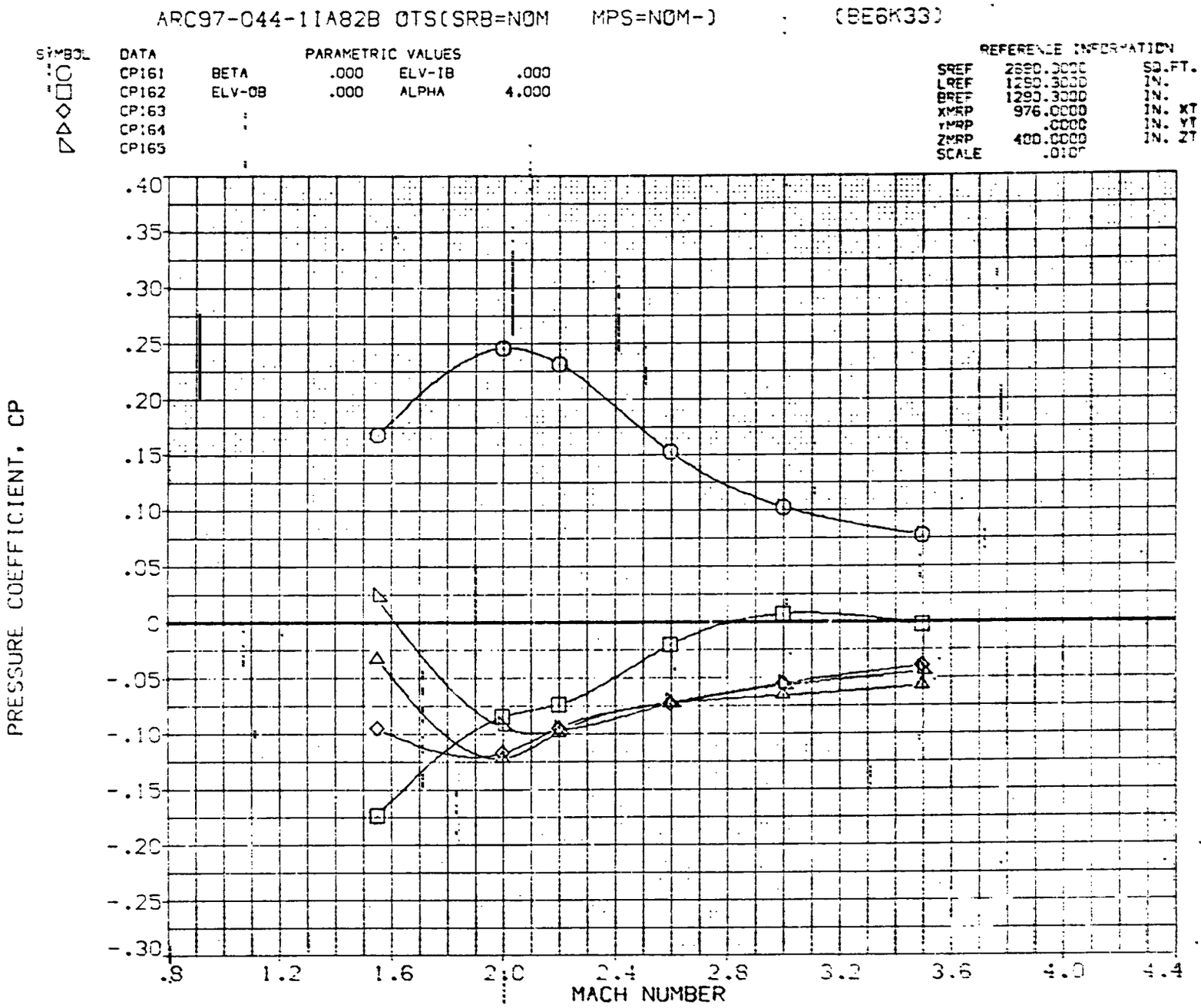


FIG. 98 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

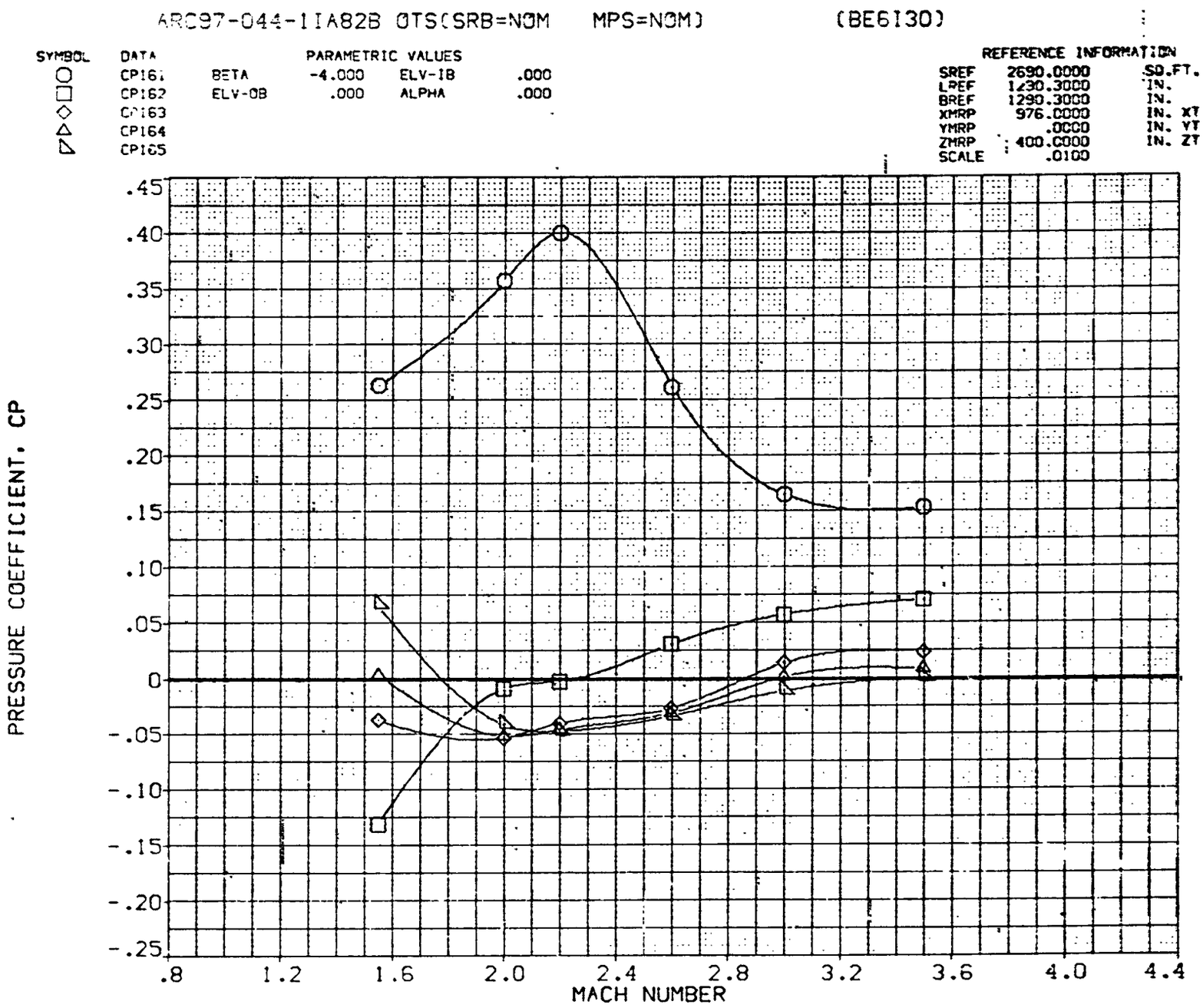


FIG. 99 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM) (BE6I30)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP161	BETA	-2.000	ELV-IB	.000
□	CP162	ELV-OB	.000	ALPHA	.000
◇	CP163				
△	CP164				
⌀	CP165				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

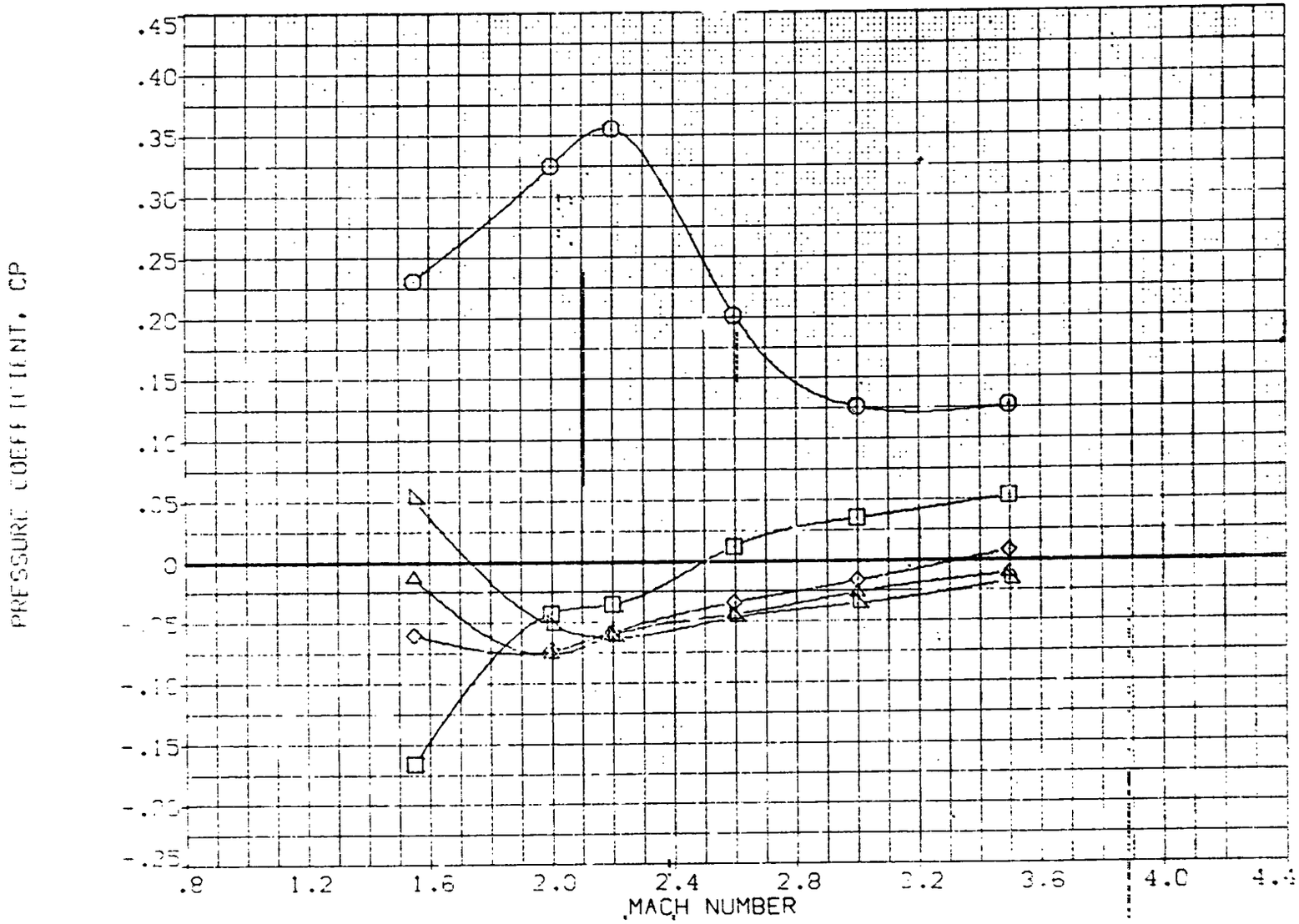


FIG. 99 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

APC9T-044-11A82B OTS(SRB=NOM MPS=NOM) (BE6I30)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP161	BETA	.000	ELV-IB	.000
□	CP162	ELV-OB	.000	ALPHA	.000
◇	CP163				
△	CP164				
▽	CP165				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

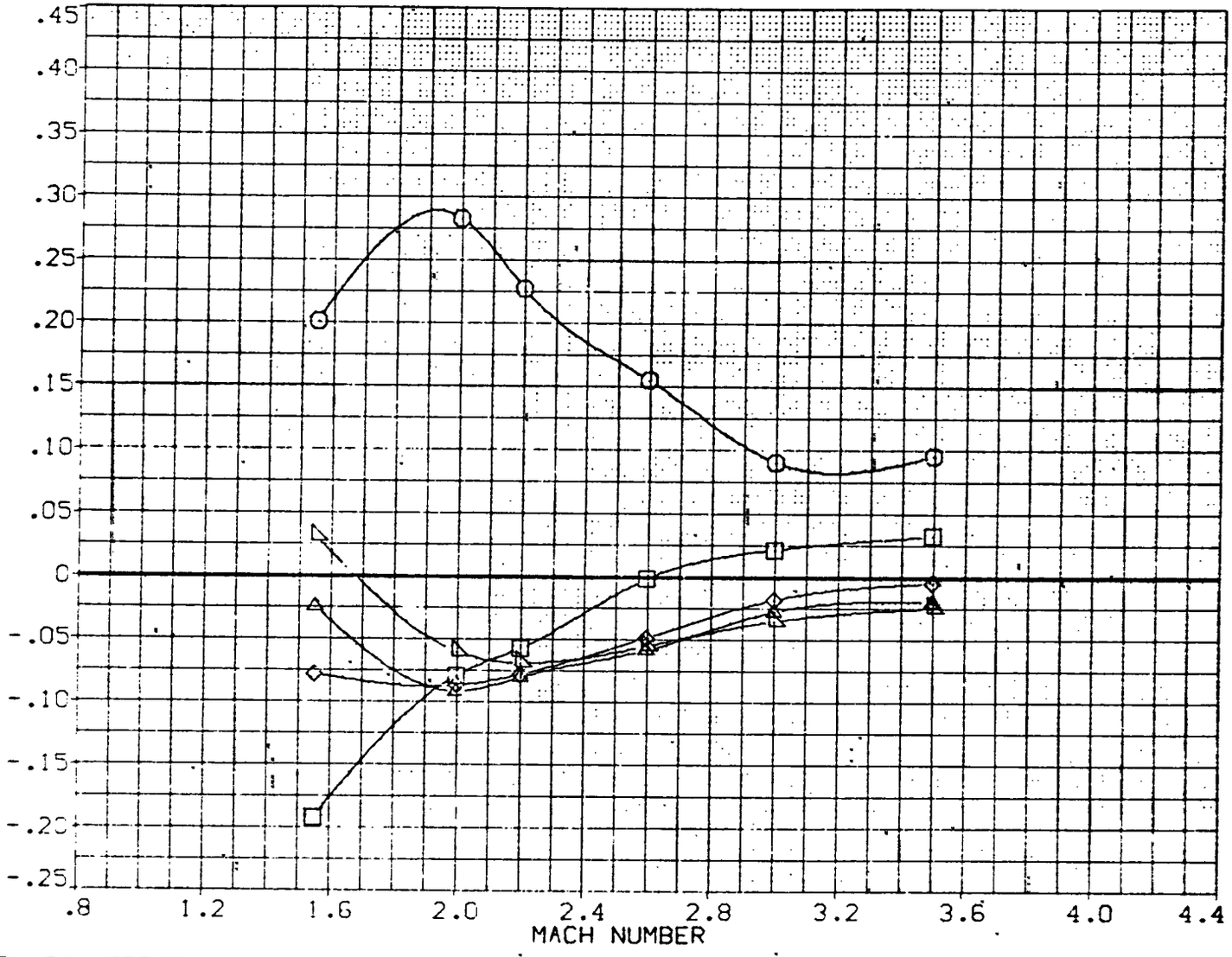


FIG. 99 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

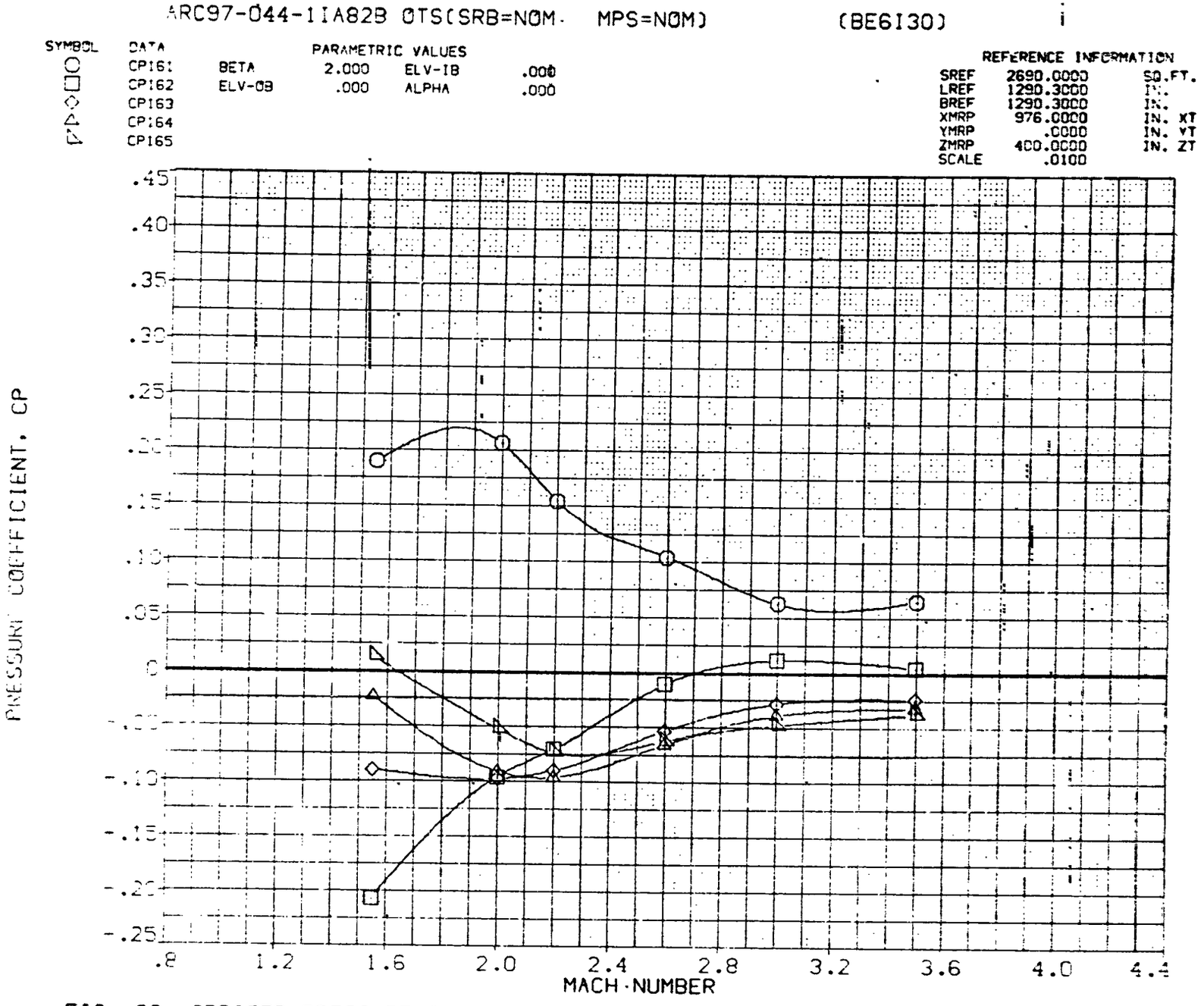


FIG. 99 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

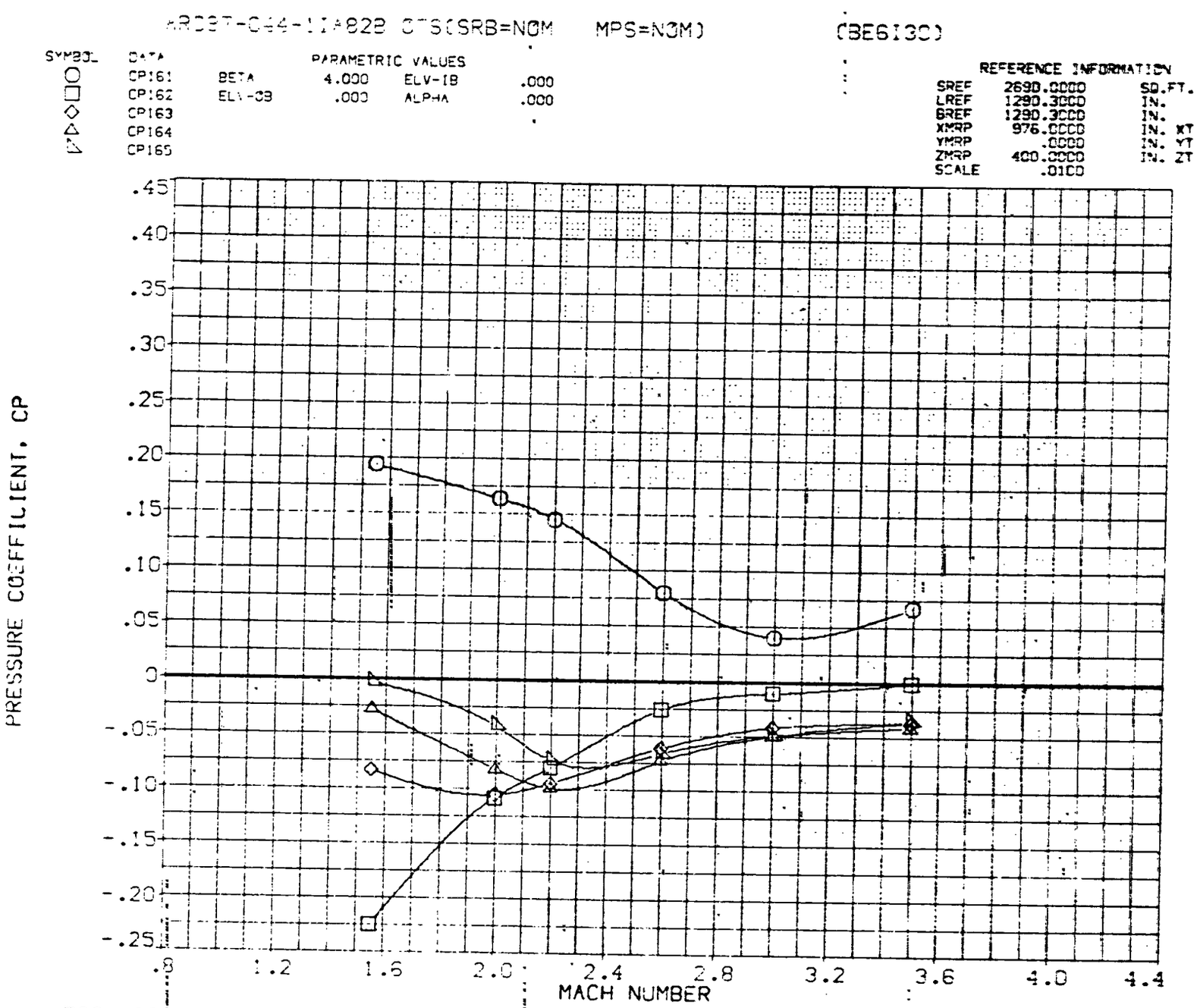


FIG. 99 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

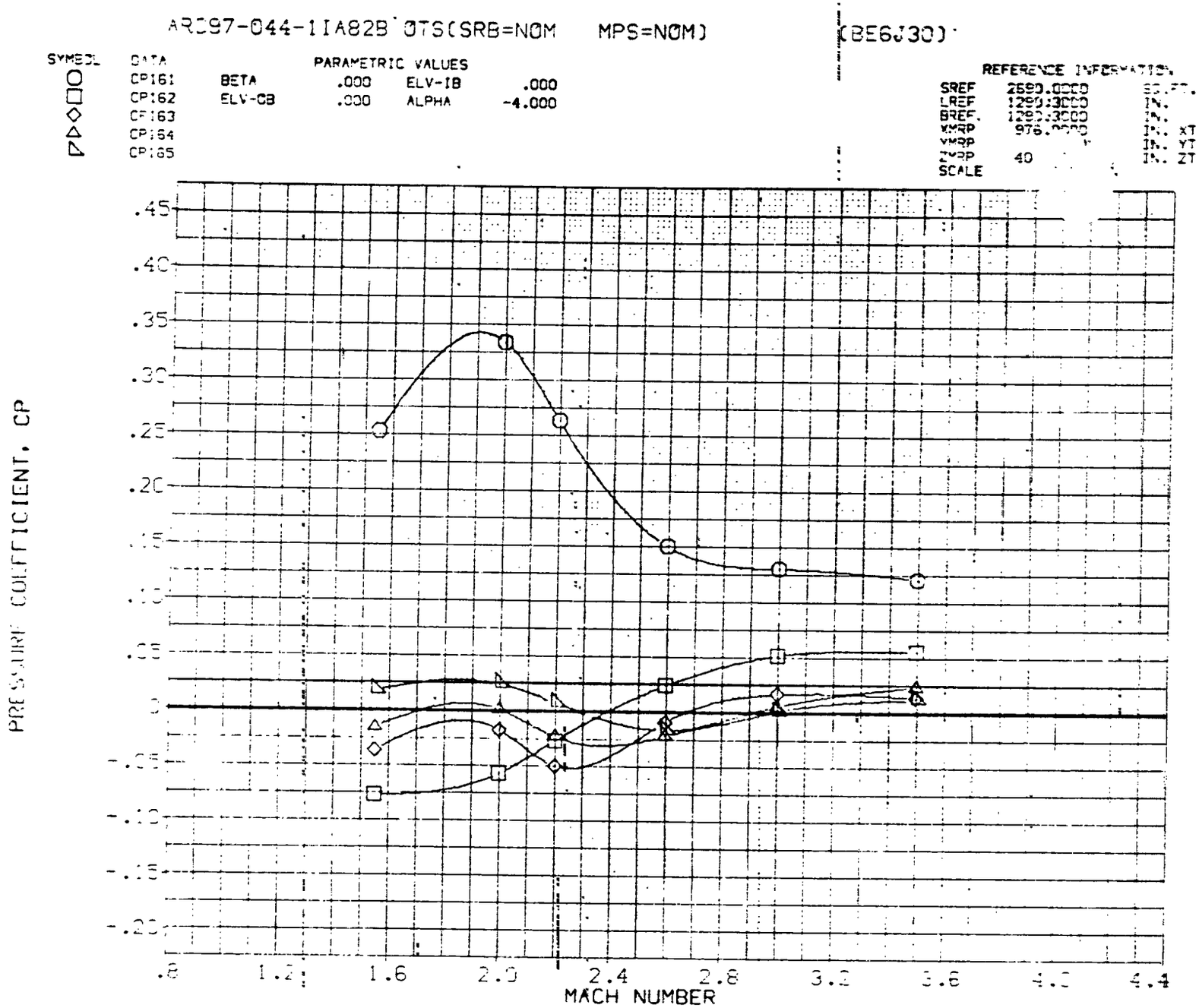


FIG. 99 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

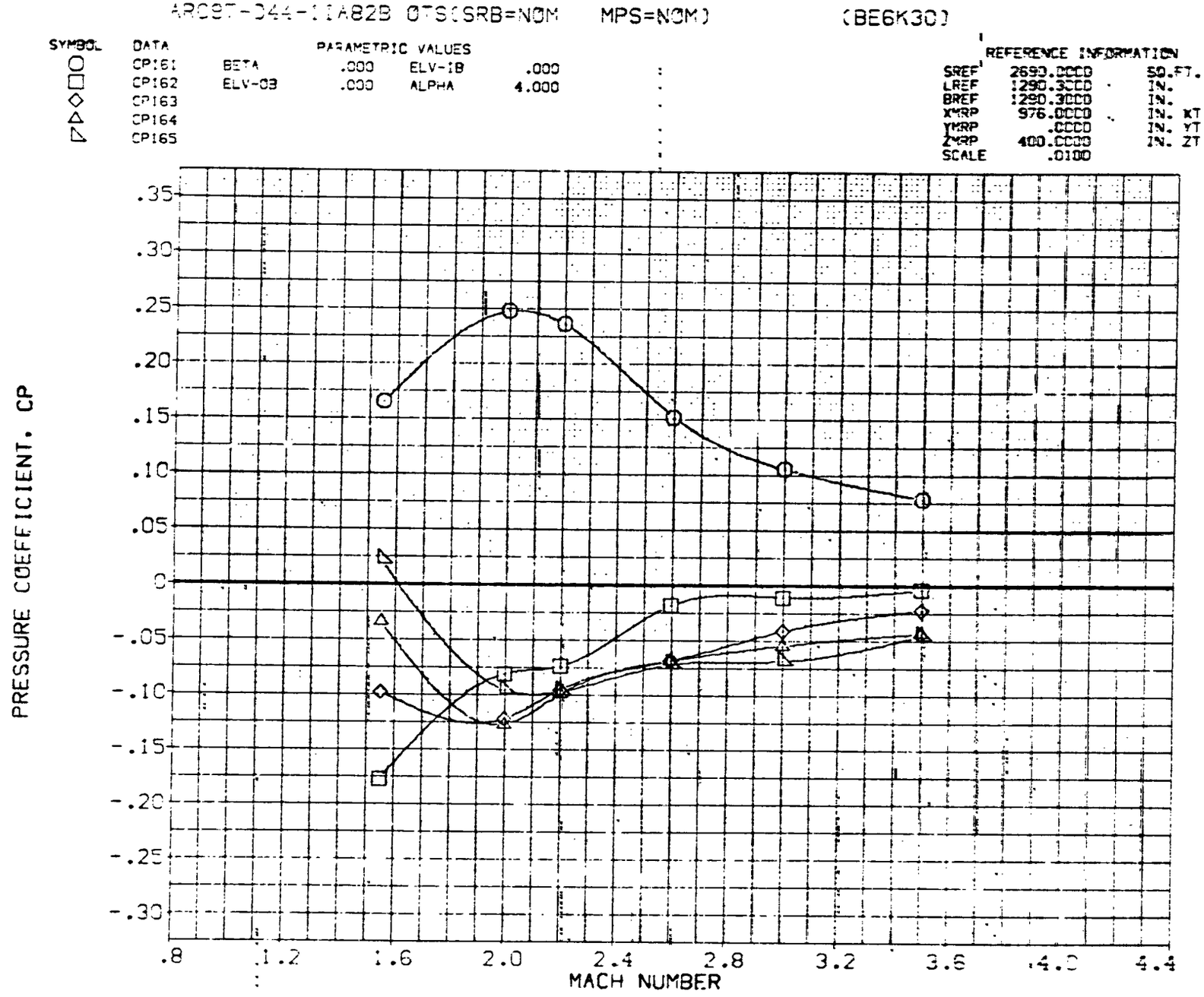


FIG. 99 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM. MPS=NOM

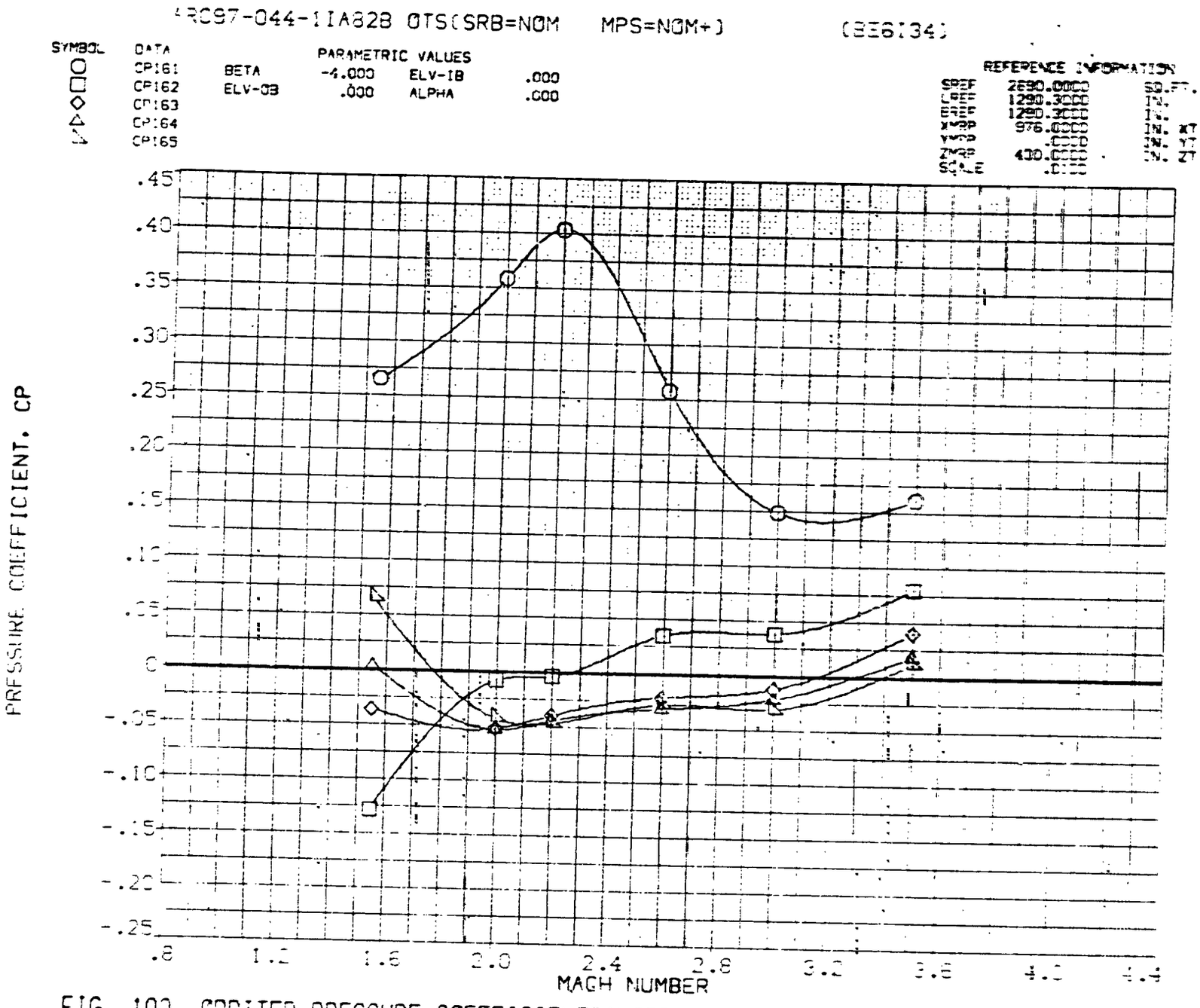


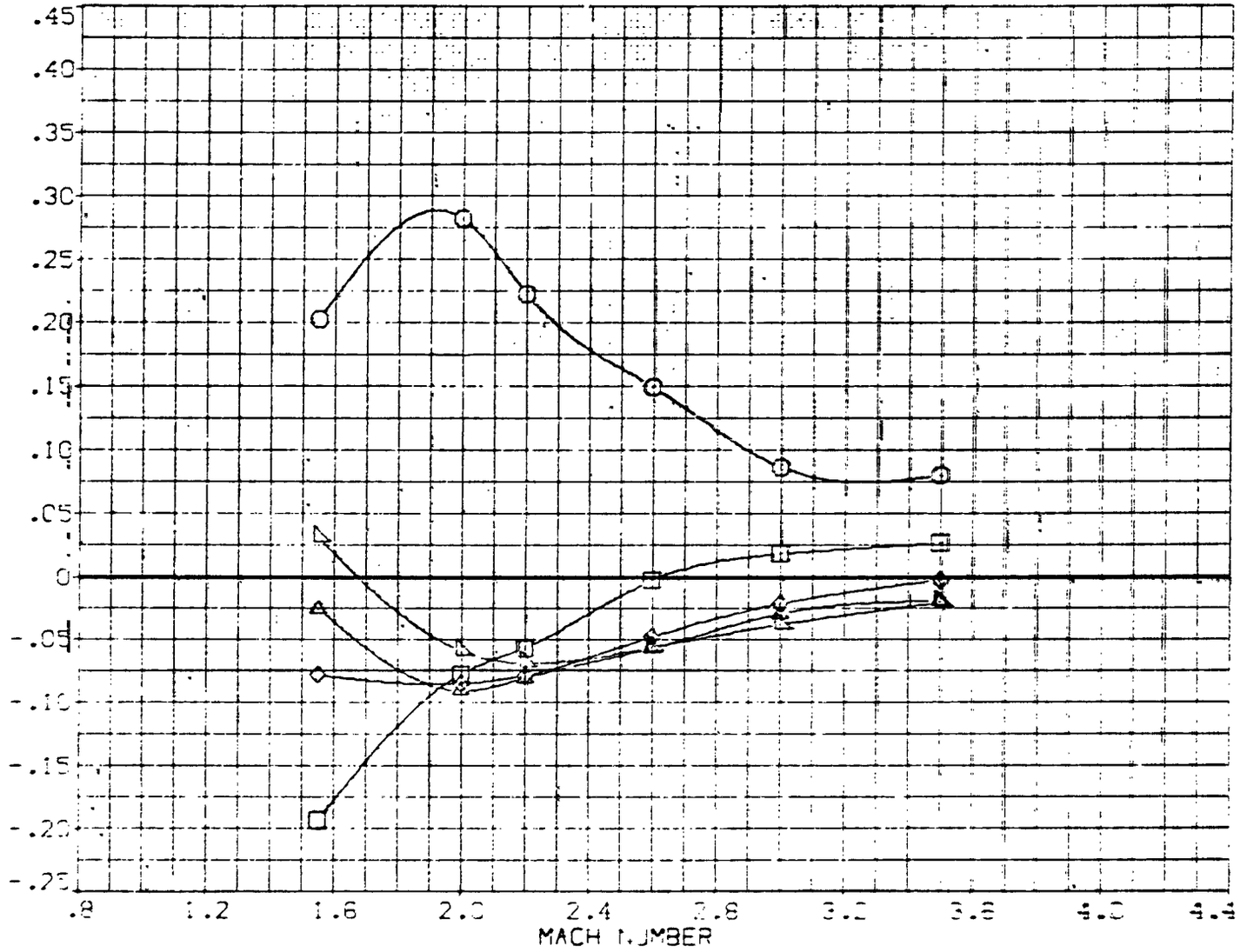
FIG. 103 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM+

APOST-344-1A82B OTS(SRB=NOM MPS=NOM+) (3E61341)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP161	BETA	.000	ELV-IB	.000
□	CP162	ELV-OB	.000	ALPHA	.000
◇	CP163				
△	CP164				
▽	CP165				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1041.4000	IN.
BREF	1290.0000	IN.
XMRP	960.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	



PRESSURE COEFFICIENT, CP

FIG. 100 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM. MPS=NOM+

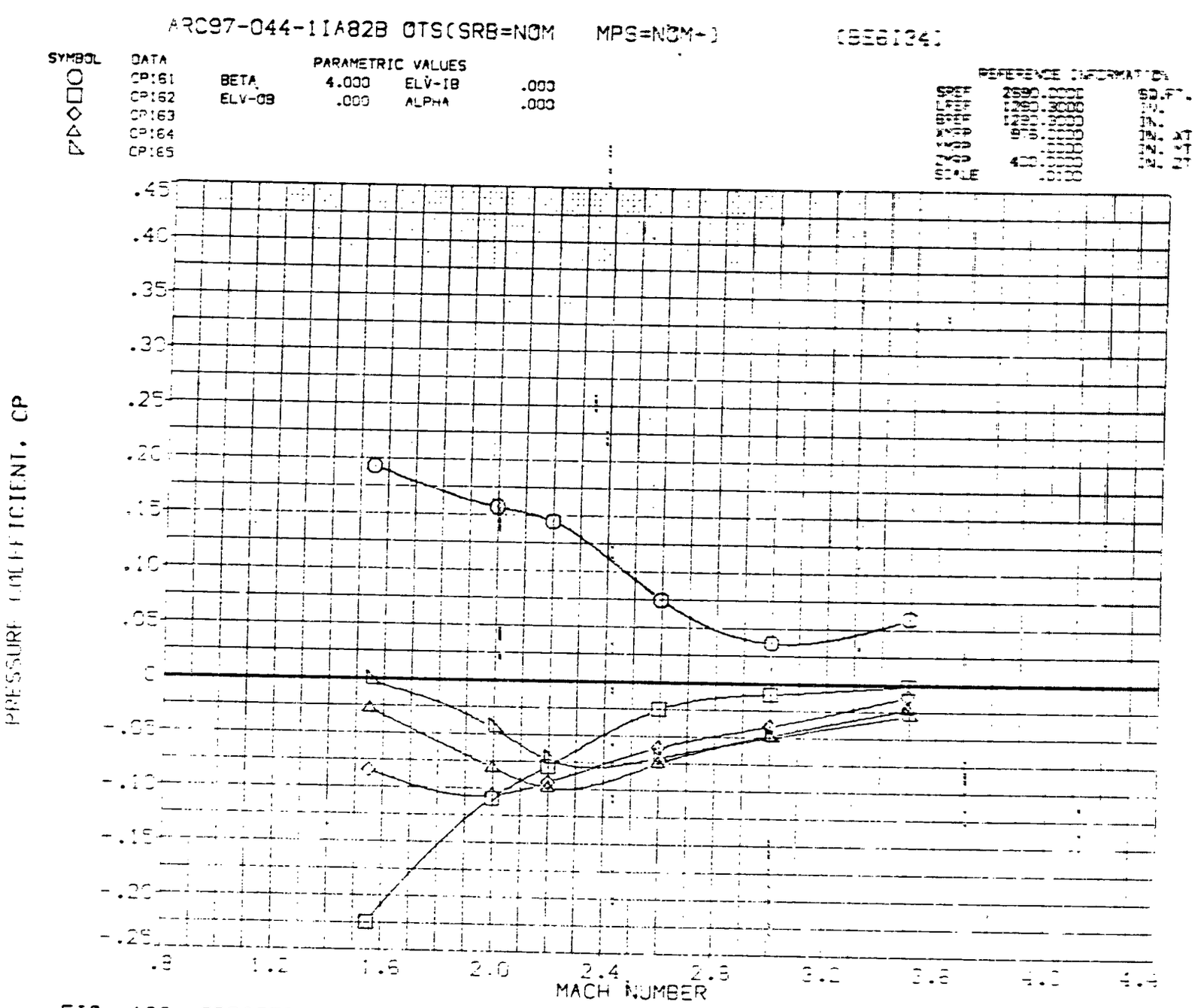


FIG. 100 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

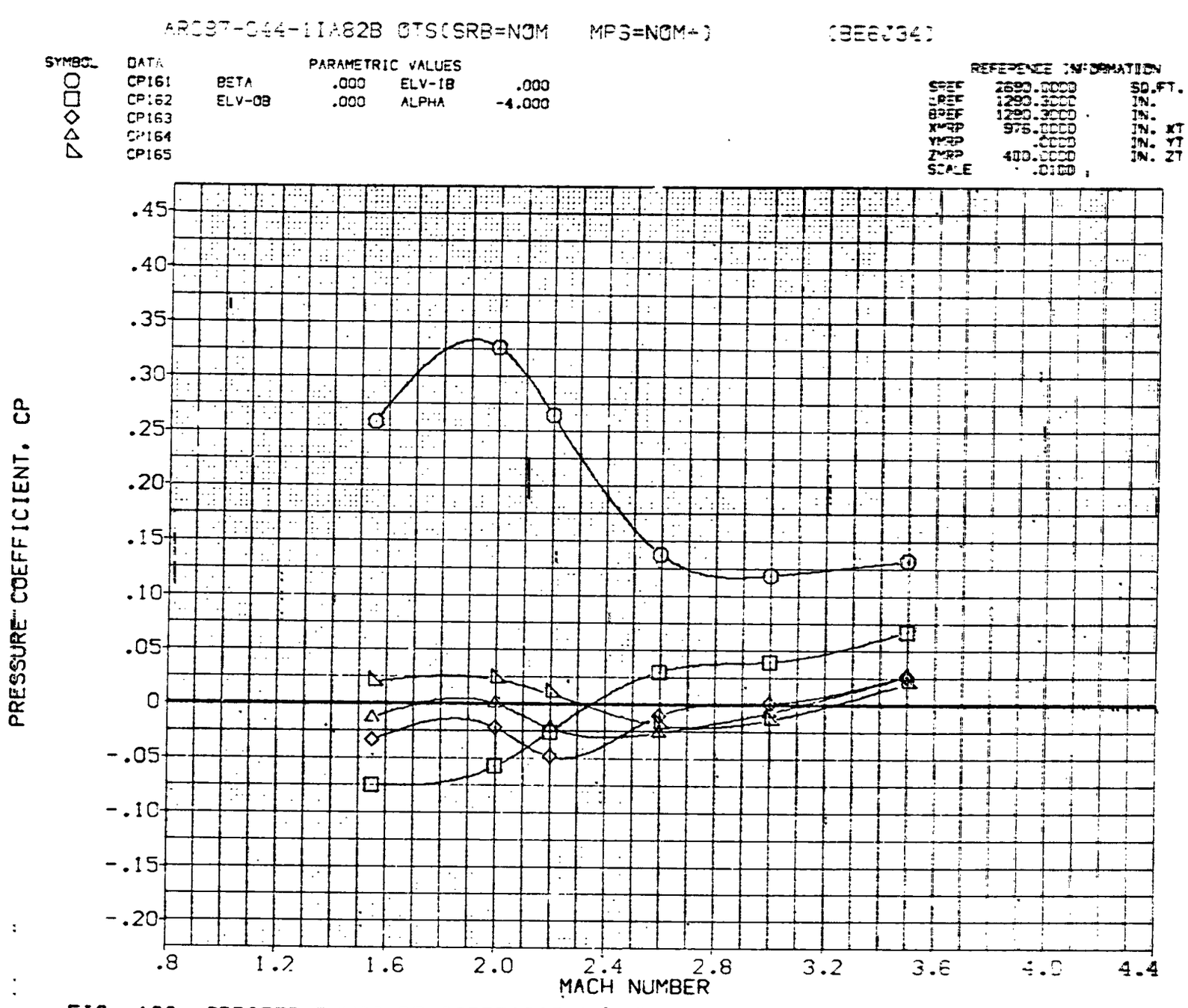


FIG. 100 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM+

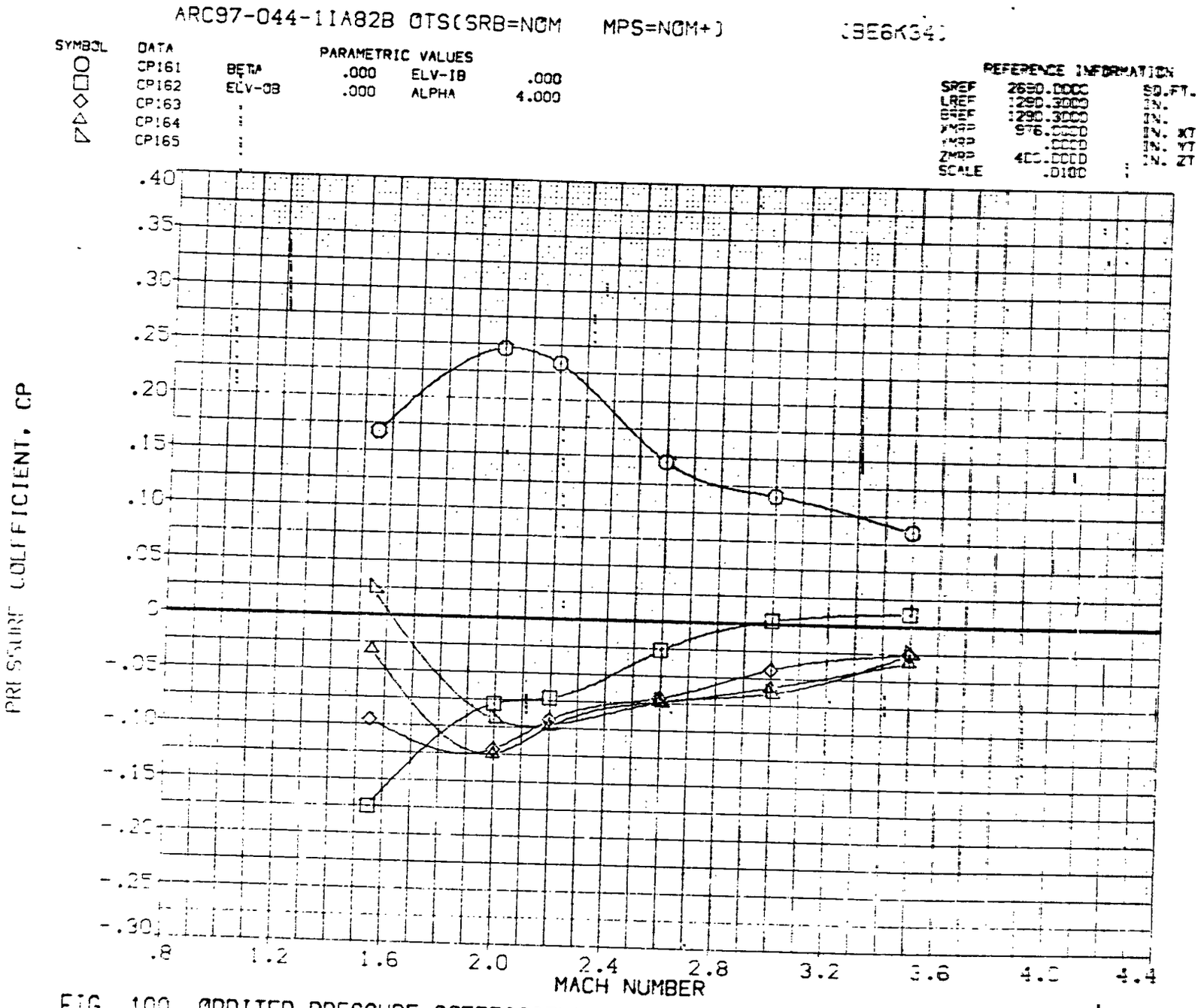


FIG. 100 ORBITER PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

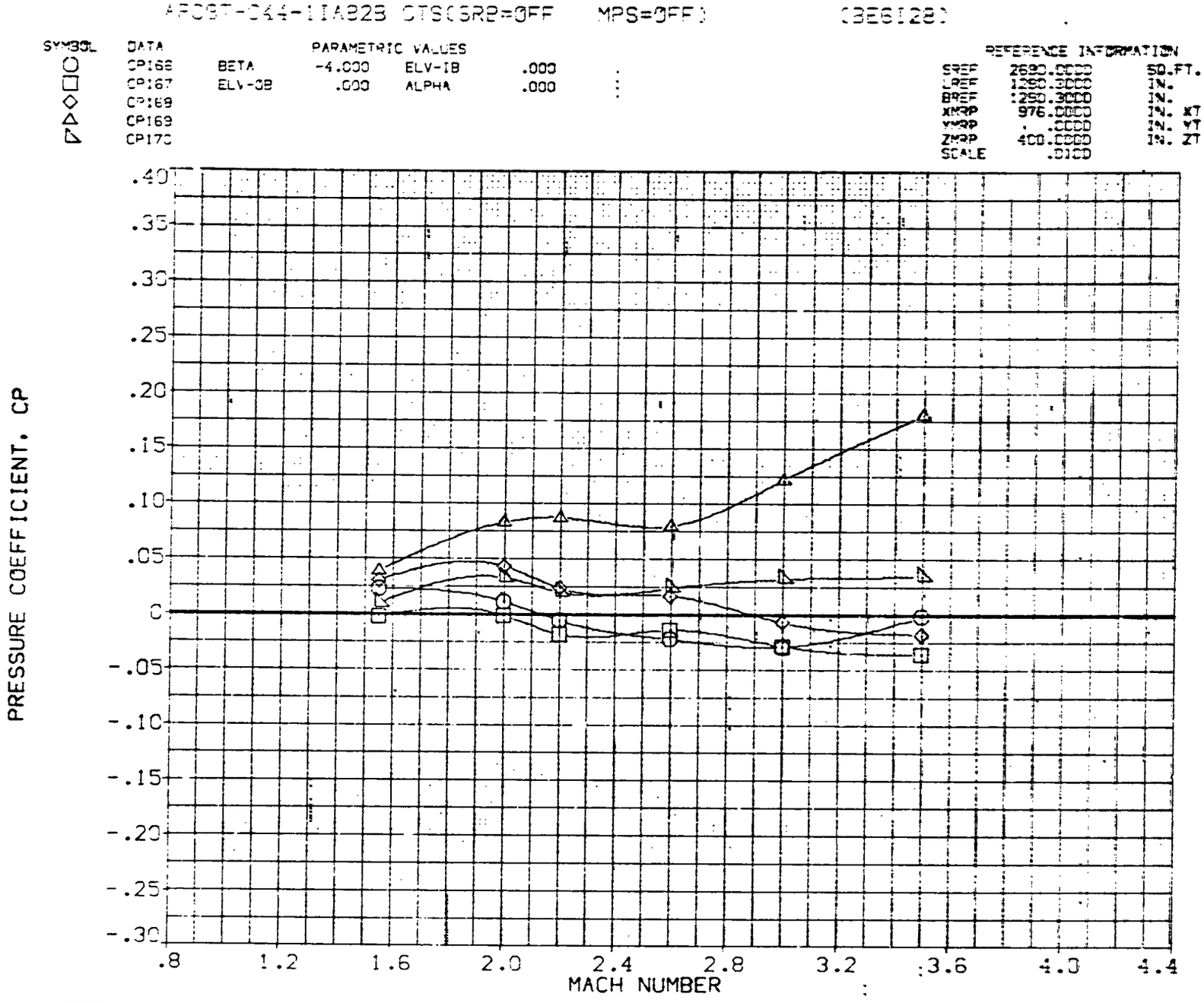


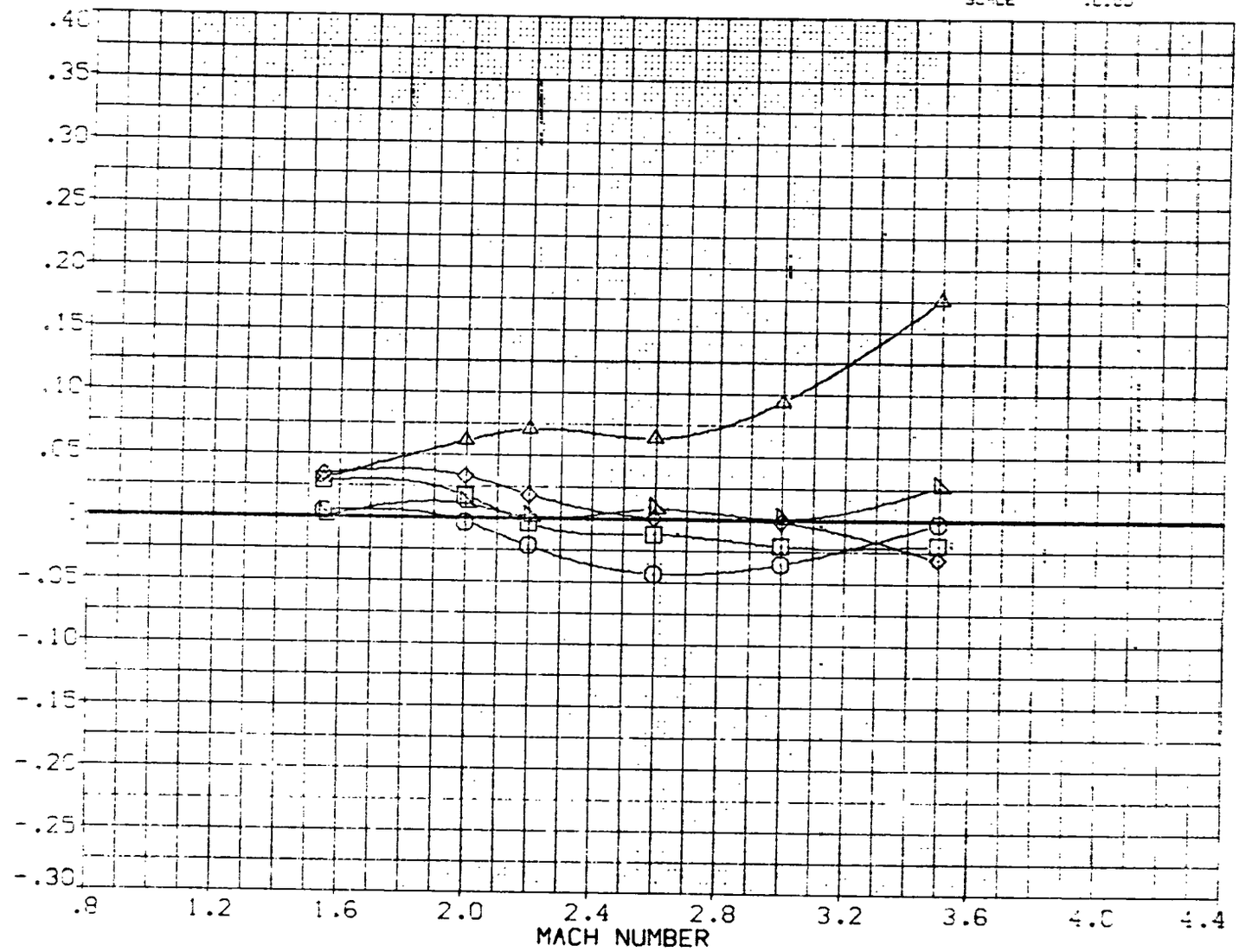
FIG. 101 OMS PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

ARC97-044-1IA82B OTS(SRB=OFF MPS=OFF) (BE6I28)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP166	BETA	-2.000	ELV-IB	.000
□	CP167	ELV-OB	.000	ALPHA	.000
◇	CP168				
△	CP169				
▽	CP170				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	



PRESSURE COEFFICIENT, CP

FIG. 101 OMS PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

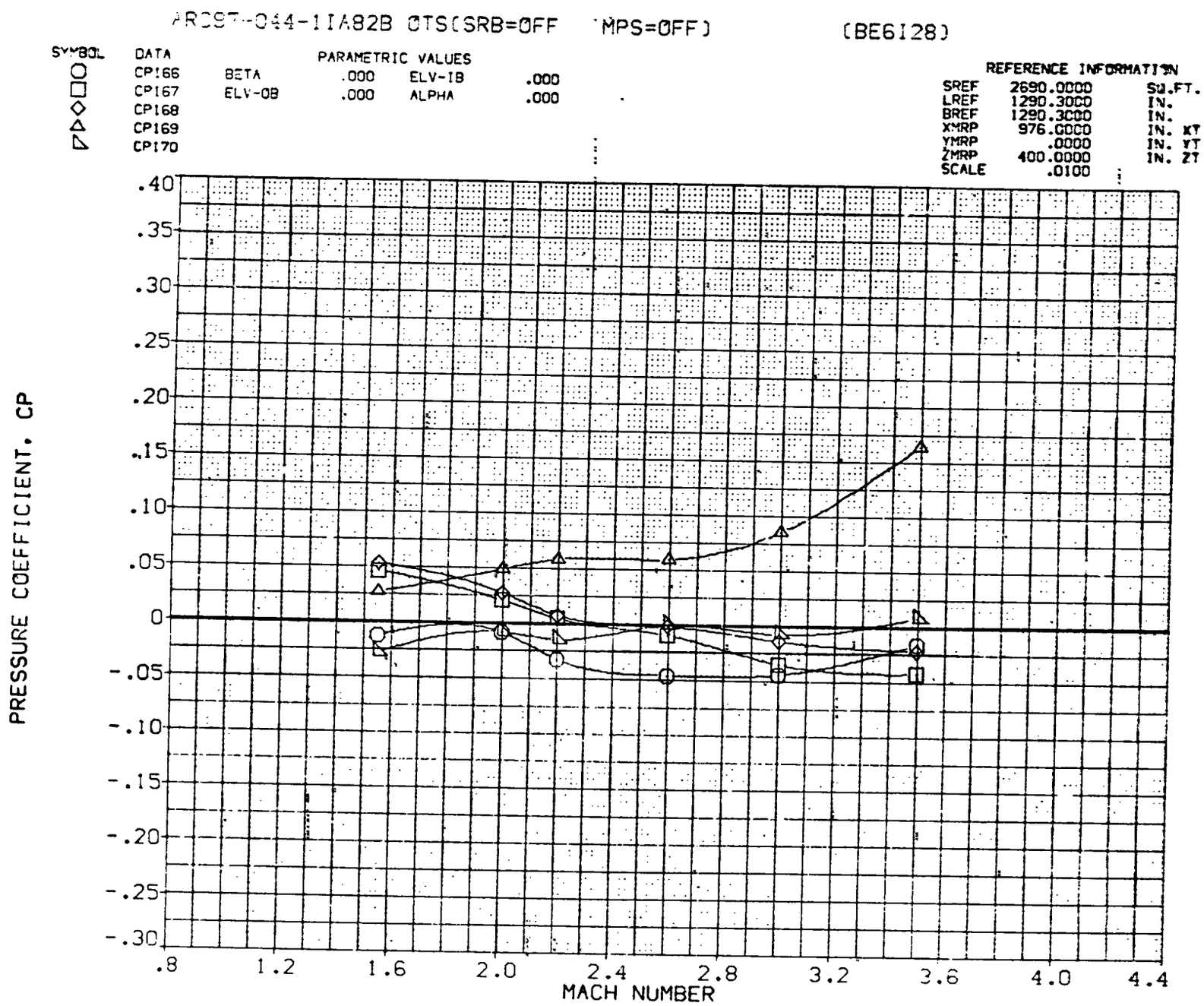


FIG. 101 OMS PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

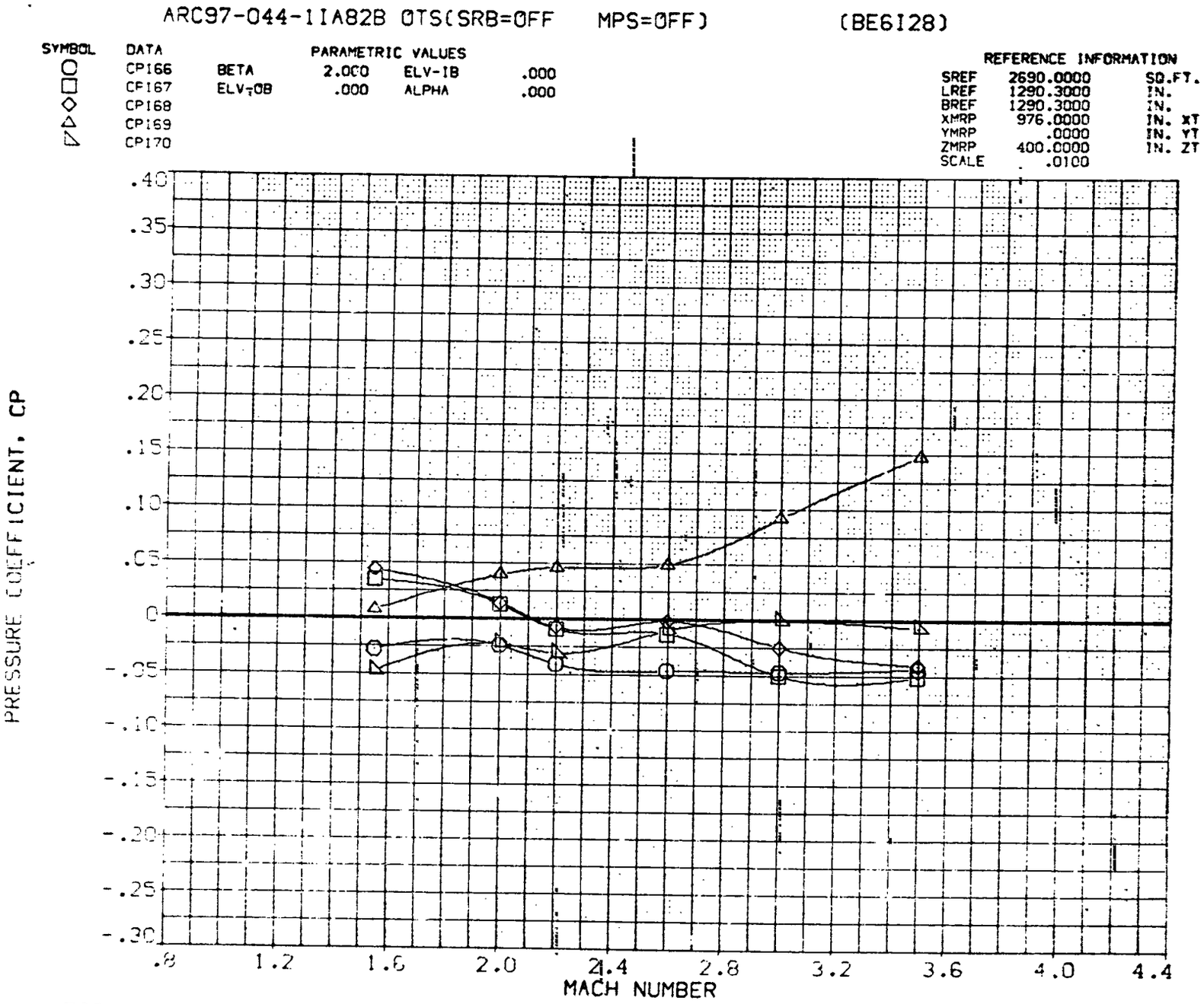


FIG. 101 OMS PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

AP267-044-11A82B OTS(SRB=OFF MPS=OFF) (BE6128)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP165	BETA	4.000	ELV-IB	.000
□	CP167	ELV-OB	.000	ALPHA	.000
◇	CP168				
△	CP169				
▽	CP170				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

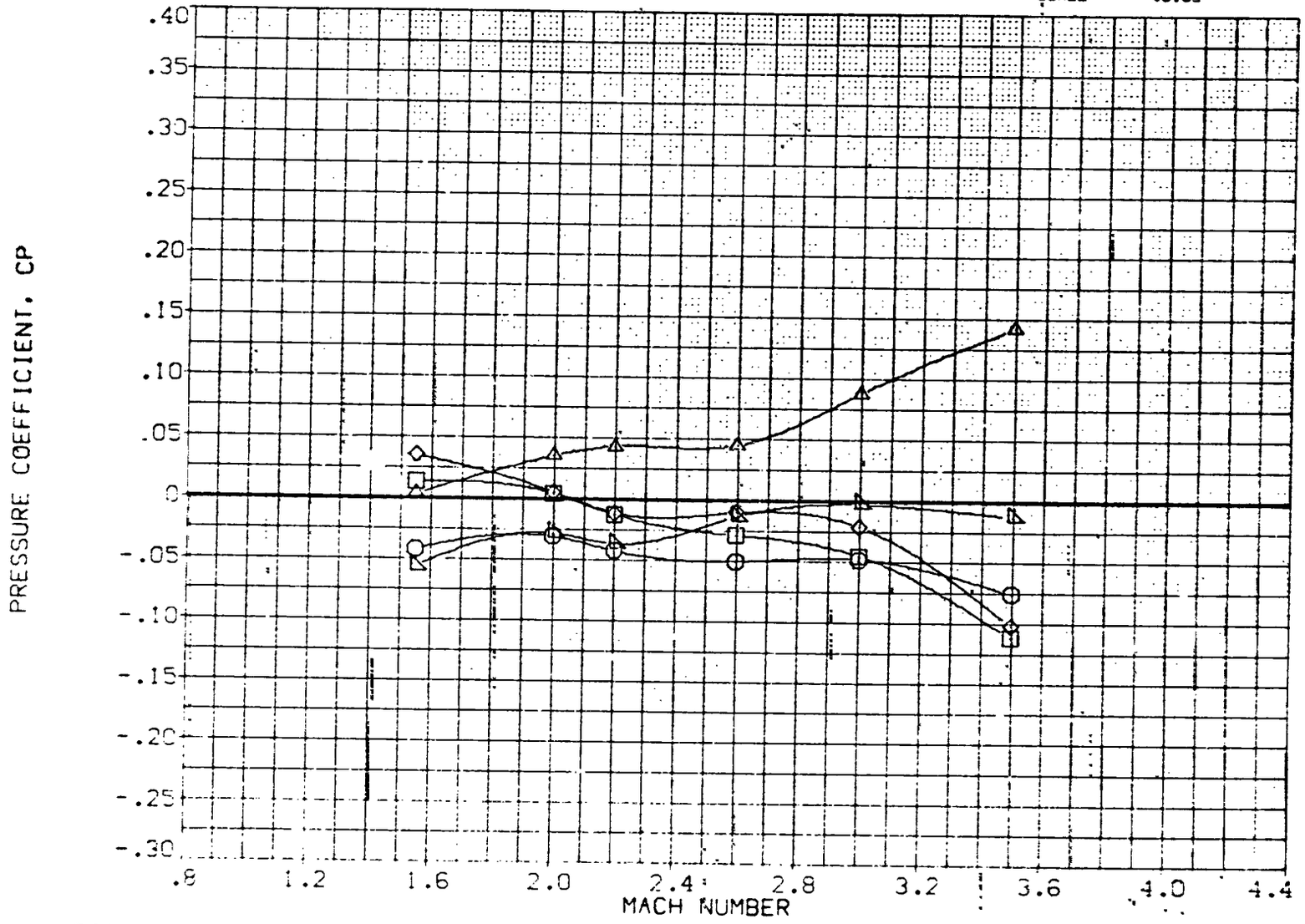


FIG. 101 OMS PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

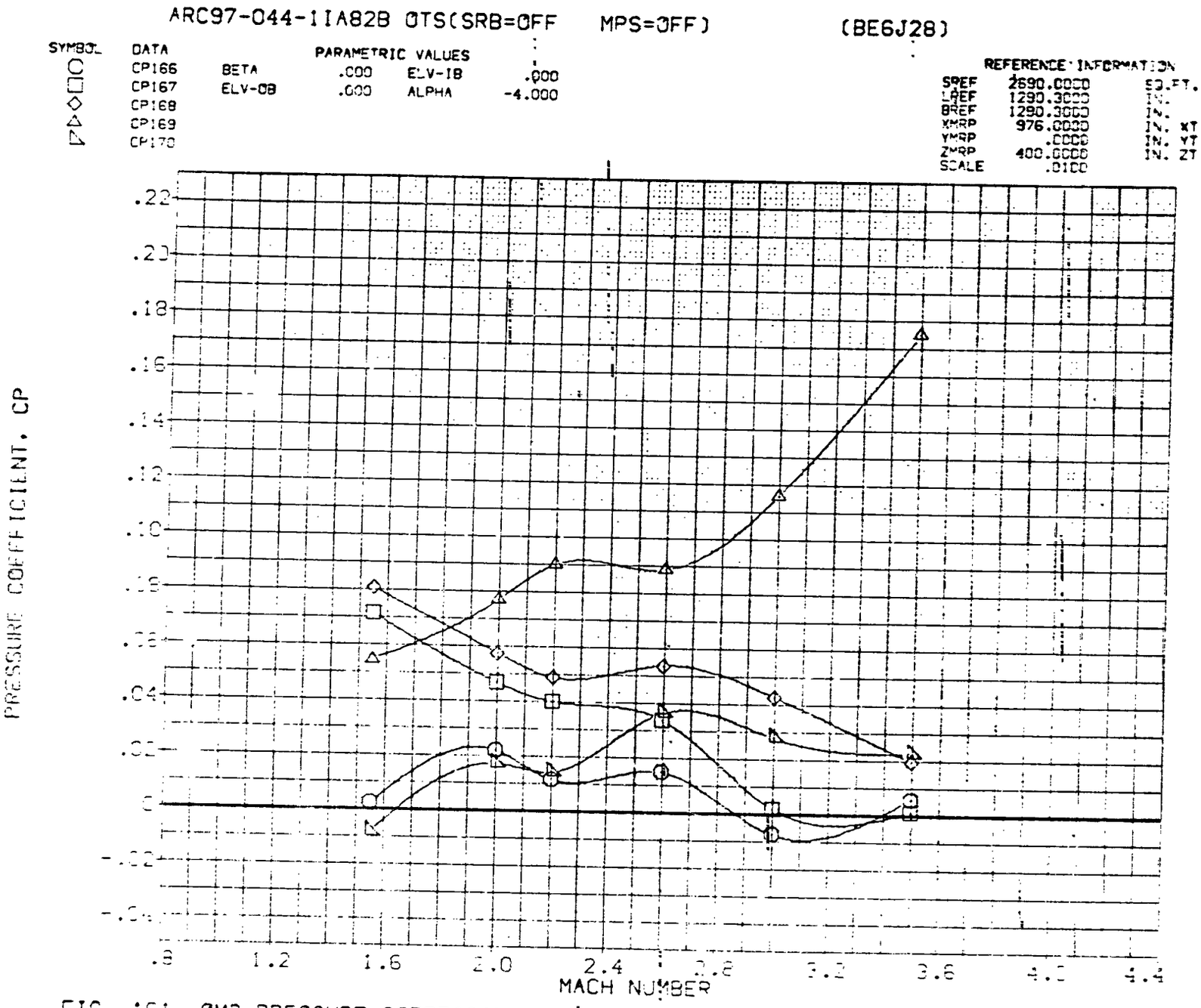


FIG. 101 OMS PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

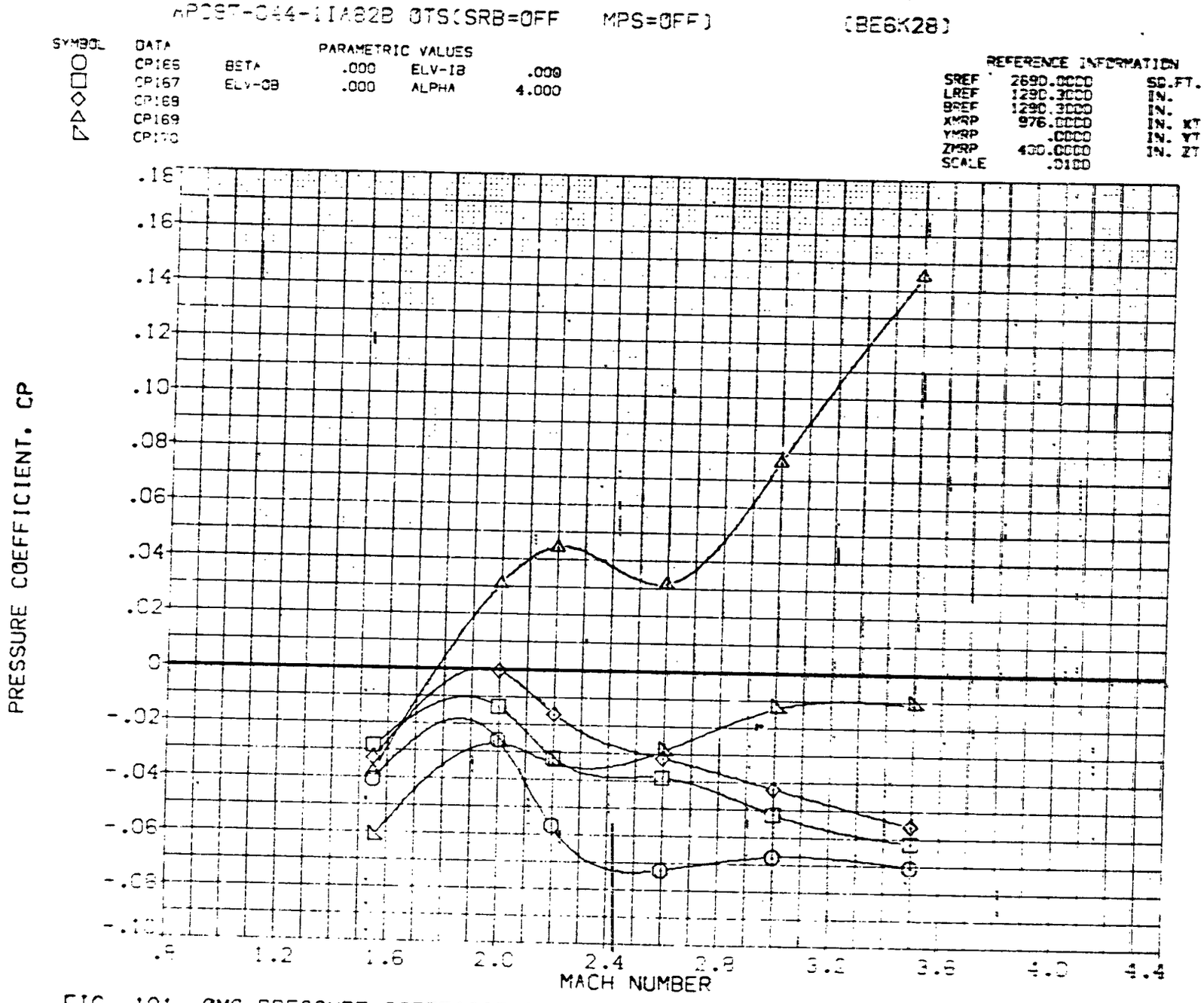


FIG. 101 OMS PRESSURE COEFFICIENTS(LEFT) SRB=OFF, MPS=OFF

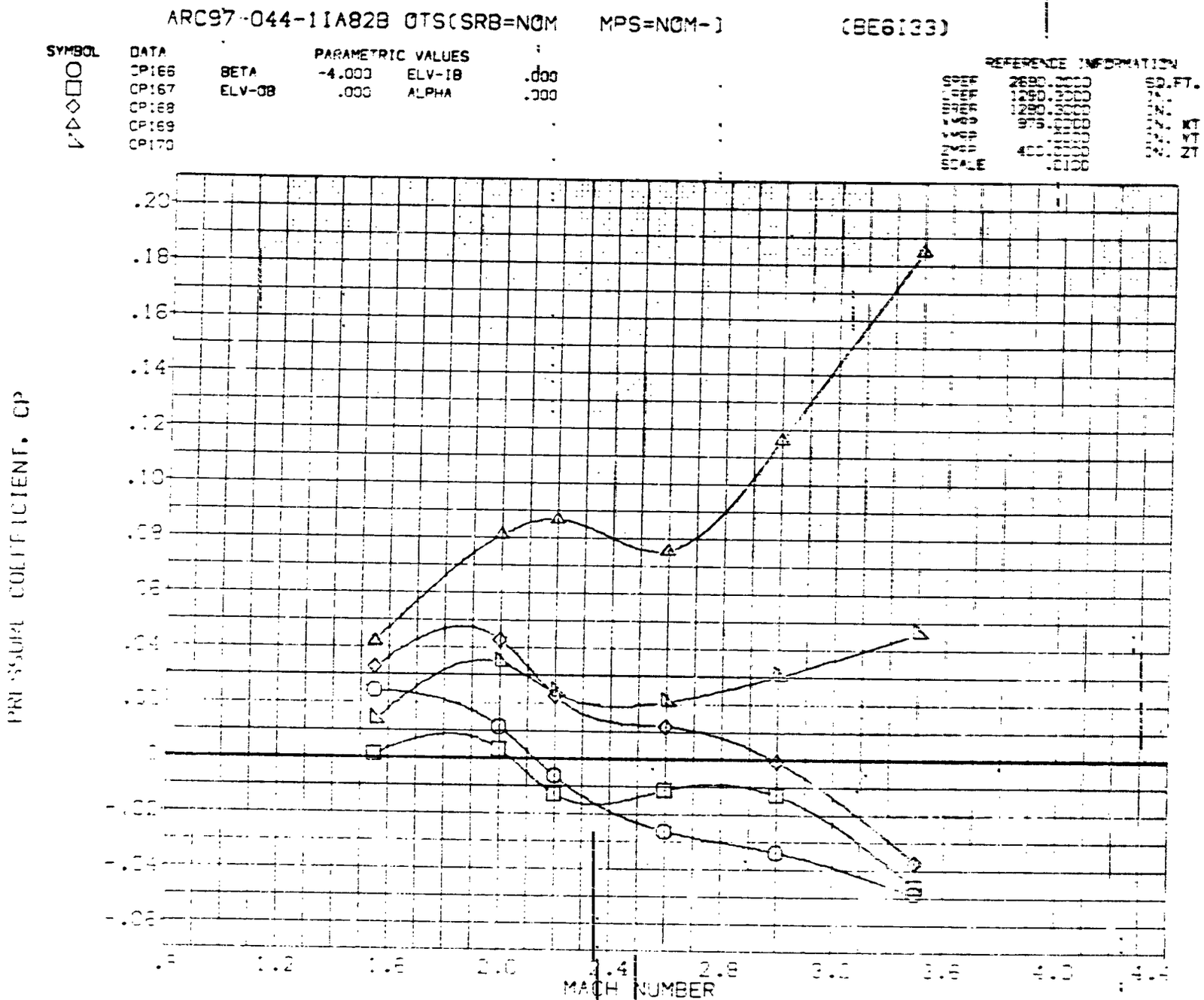


FIG. 102 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

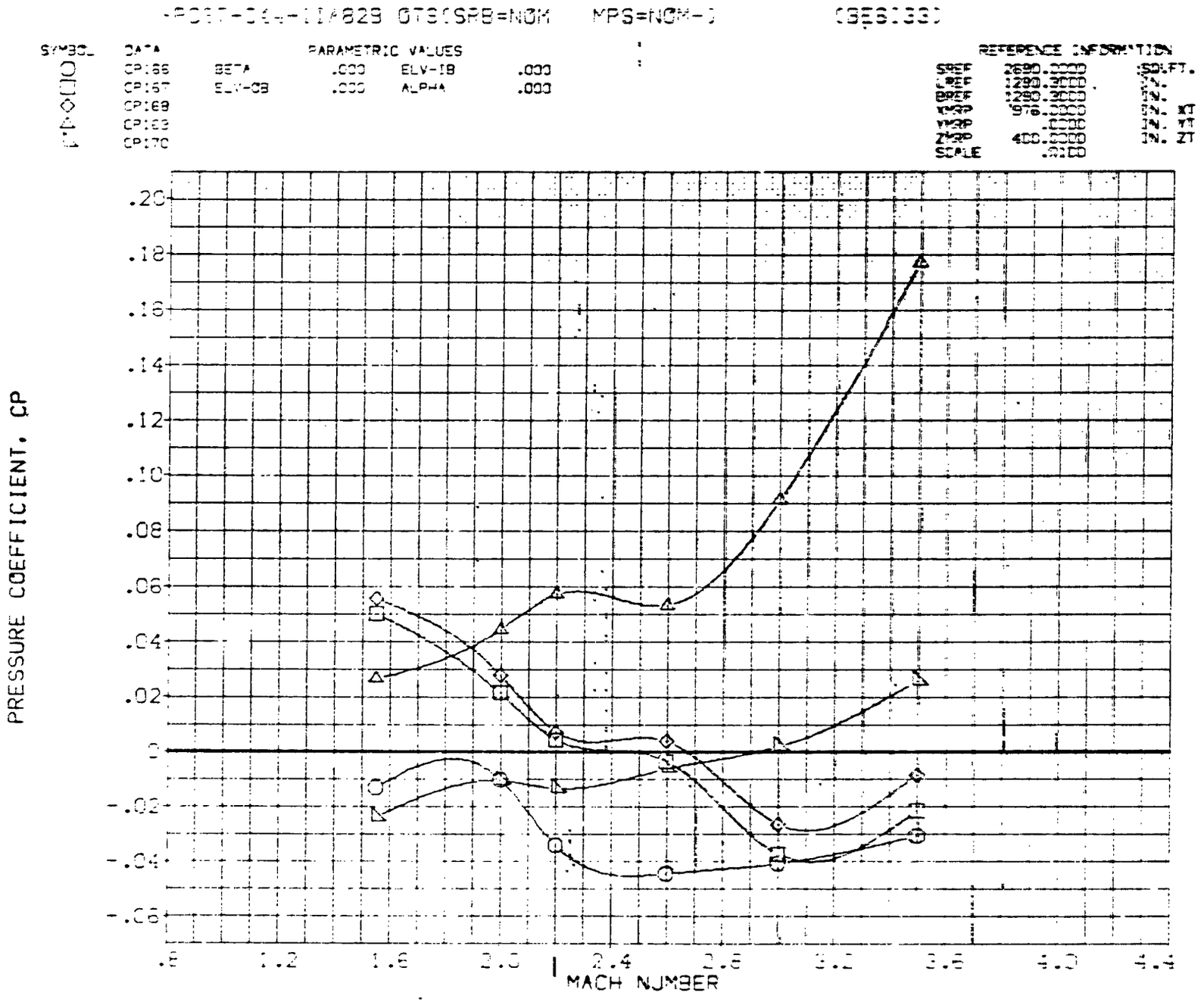


FIG. 102 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

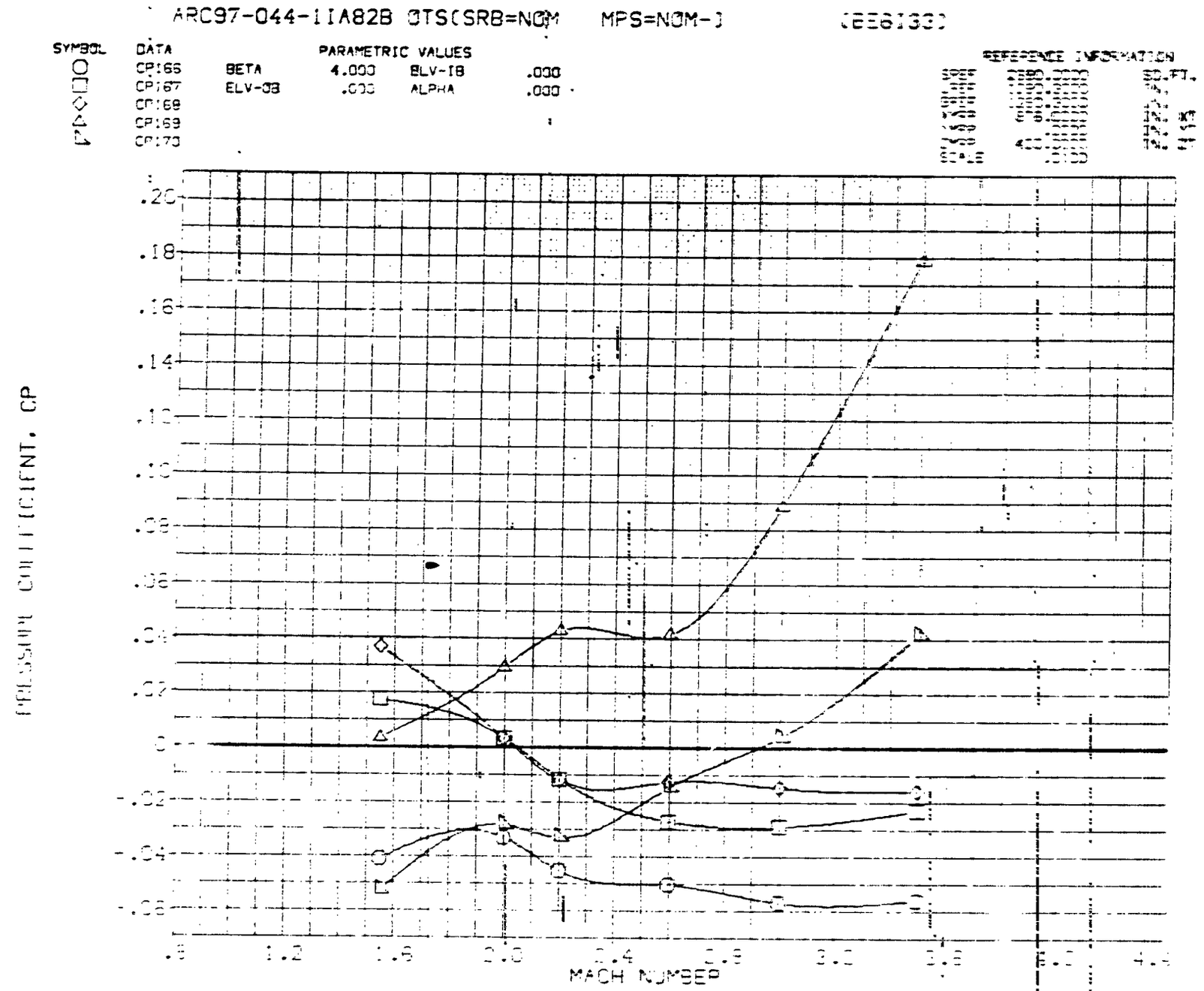


FIG. 102 OMS PRESSURE COEFFICIENTS(LEFT) SRB=

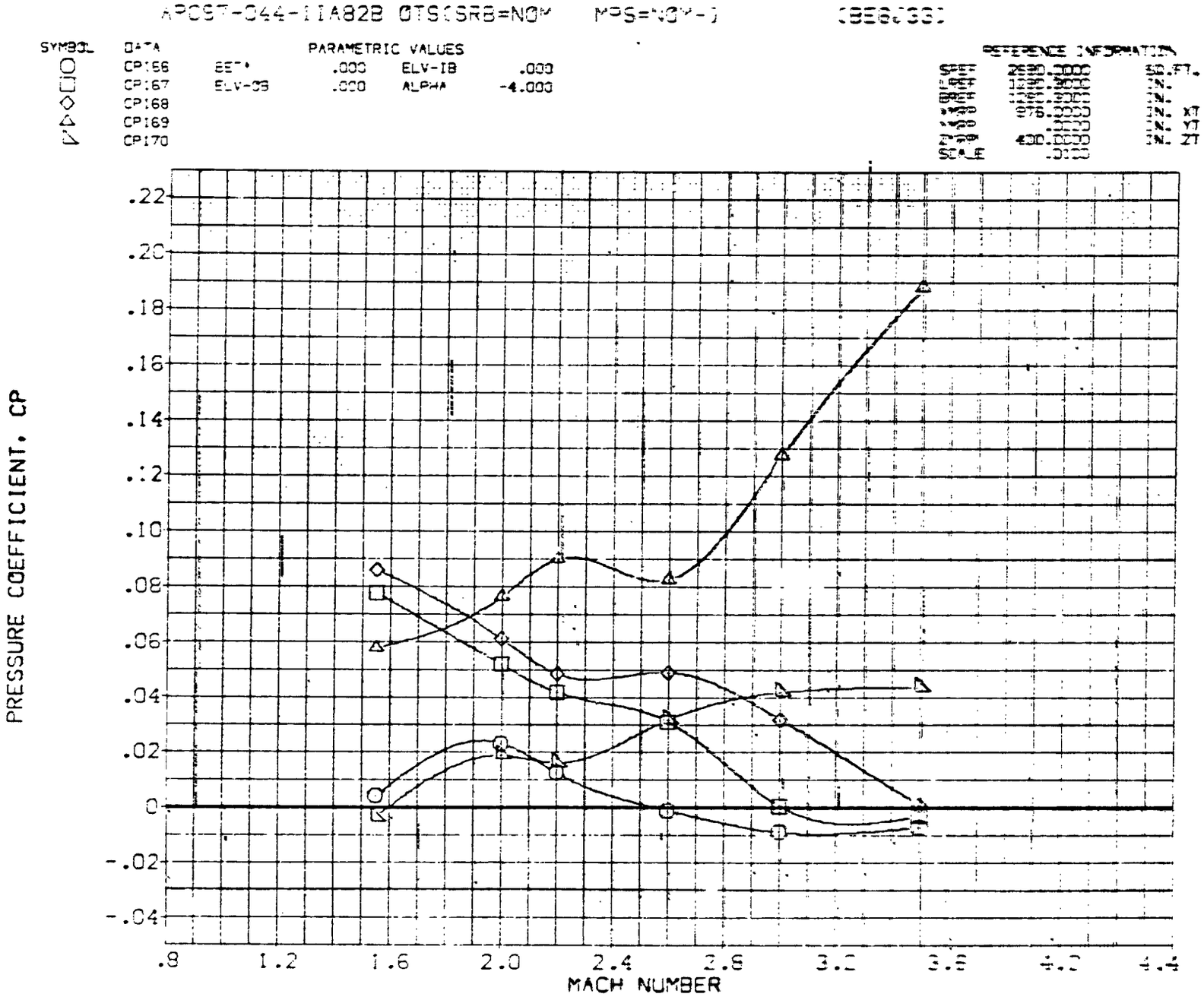


FIG. 102 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM. MPS=NOM-

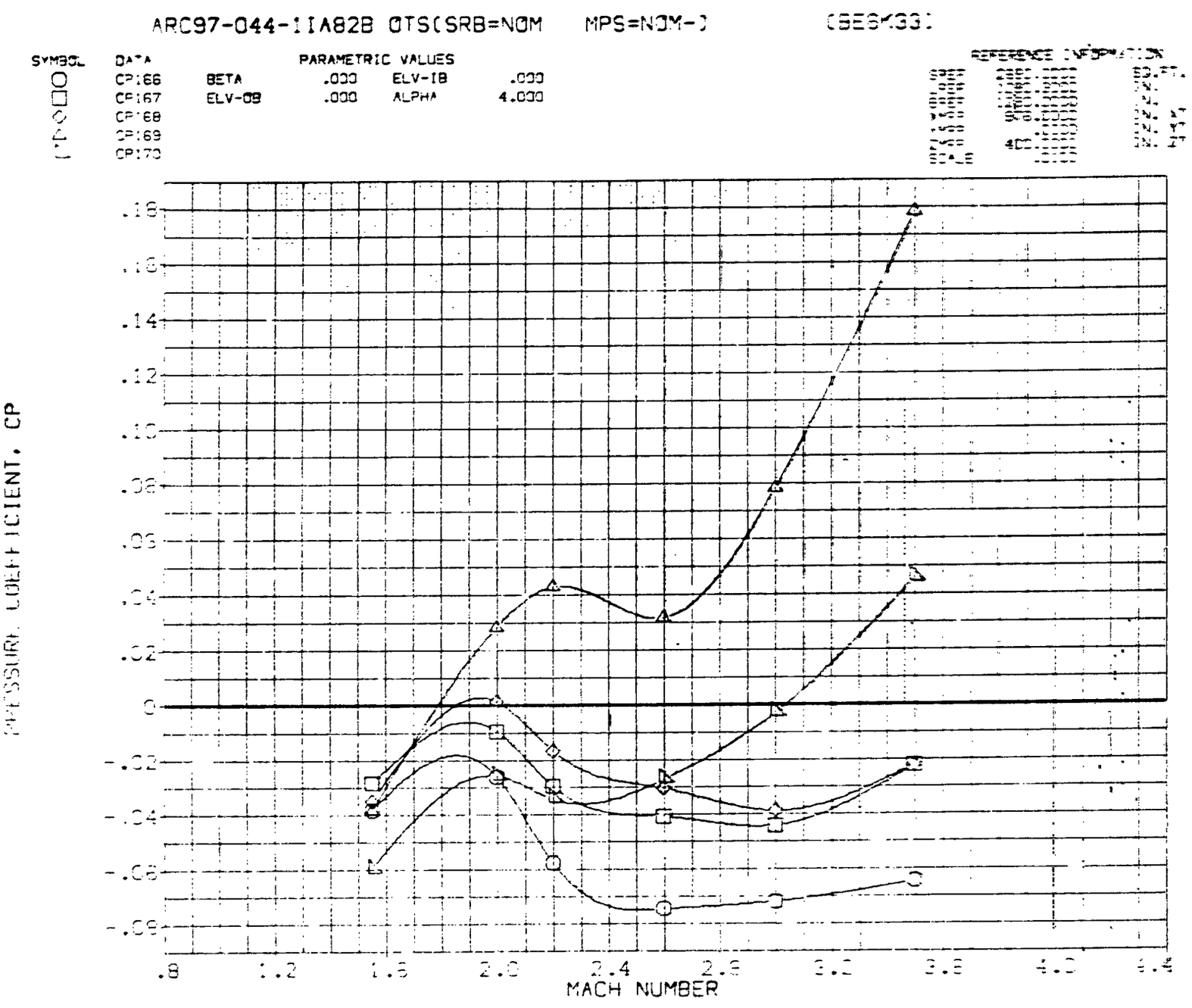


FIG. 102 OVS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM-

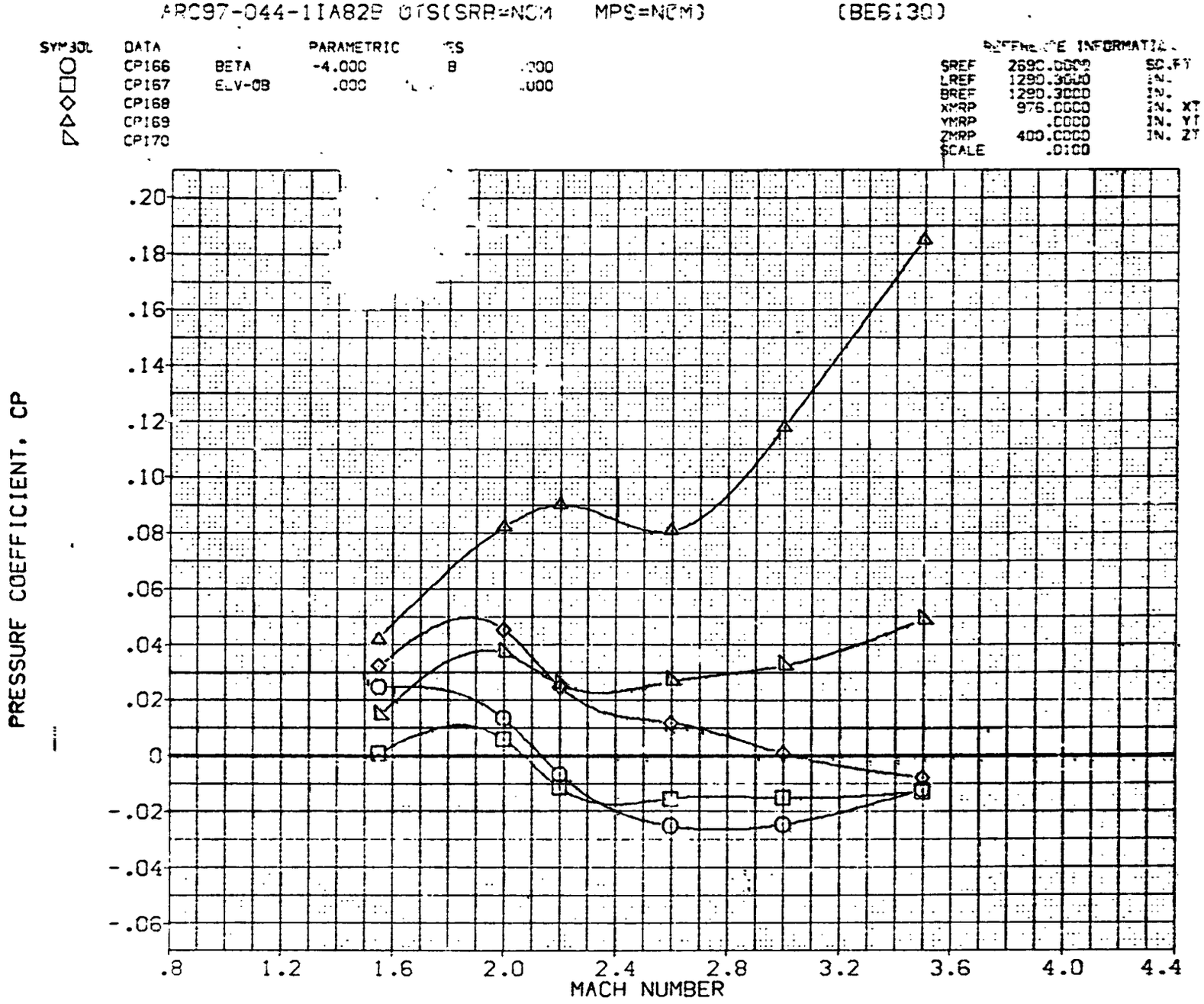


FIG. 103 0MS PRESSURE COEFFICIENTS(LEFT) SRB=N0M, MPS=N0M

ARC97-044-1IA82B 0TS(SRB=N0M MPS=N0M) (BE6130)

SYMBOL	DATA	PARAMETRIC VALUES			
○	CP166	BETA	-2.000	ELV-IB	.000
□	CP167	ELV-0B	.000	ALPHA	.000
◇	CP168				
△	CP169				
◺	CP170				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

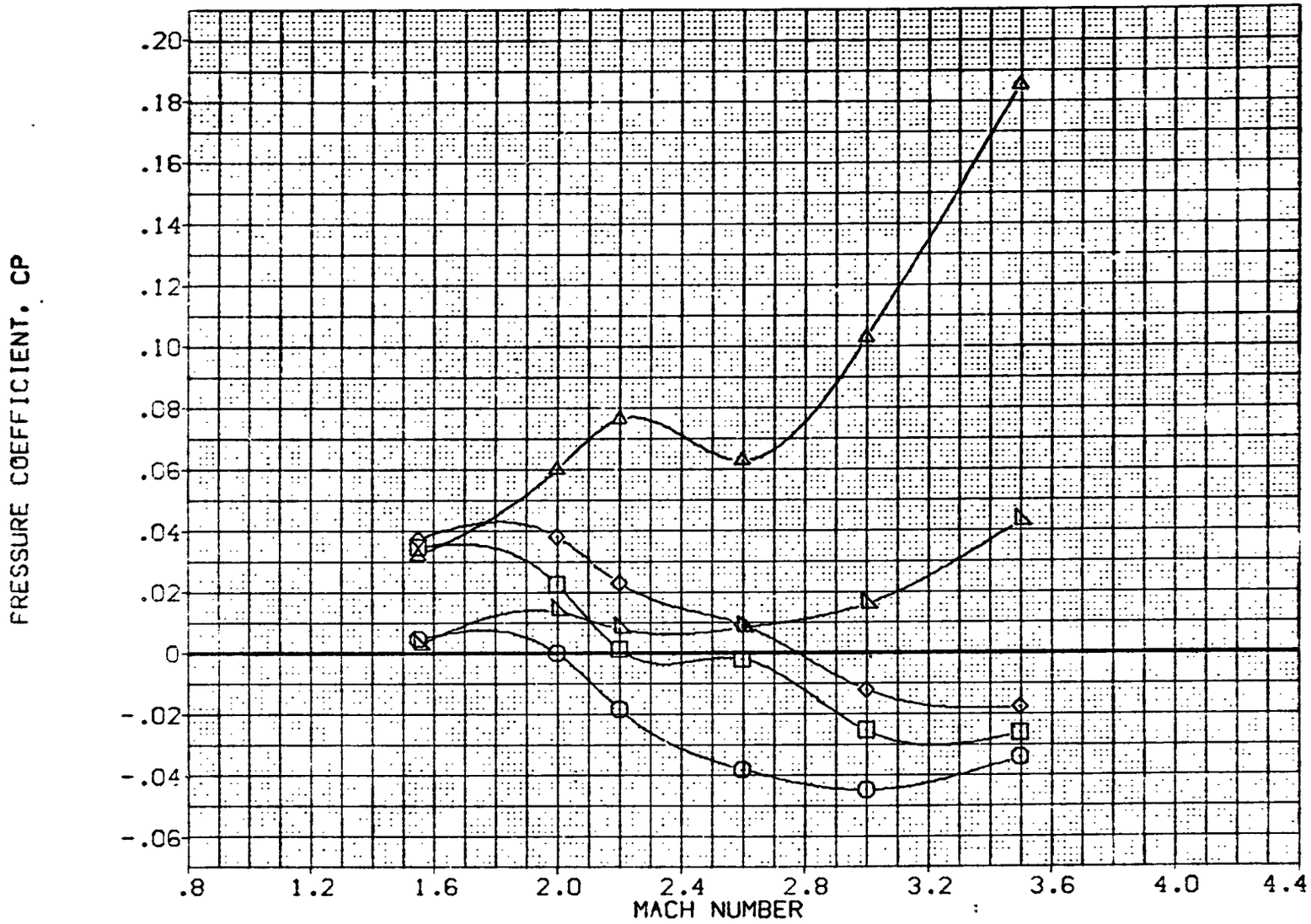


FIG. 103 0MS PRESSURE C0EFFICIENTS(LEFT) SRB=N0M, MPS=N0M

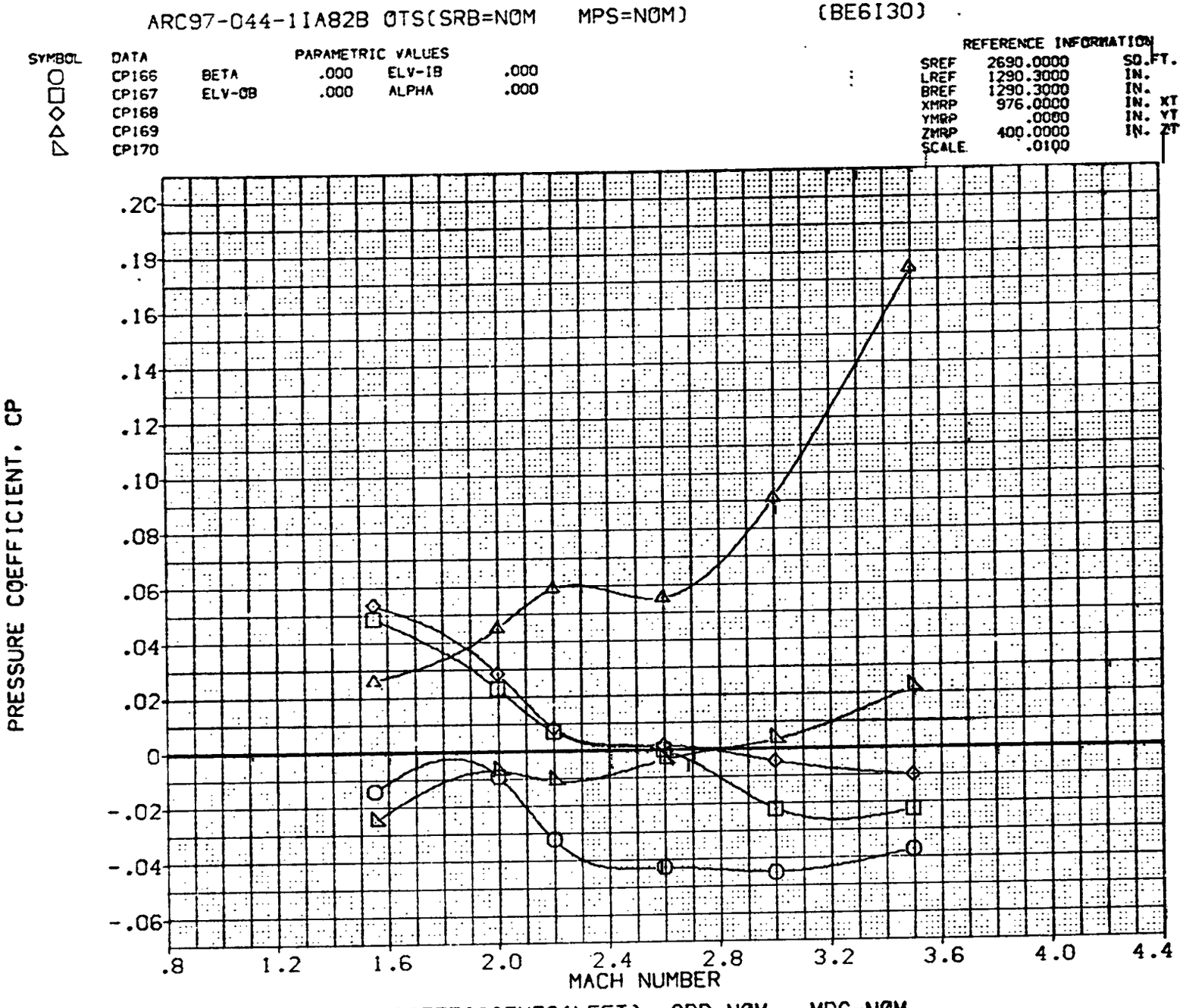


FIG. 103 0MS PRESSURE COEFFICIENTS(LEFT) SRB=N0M, MPS=N0M

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM) (BE6I30)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP166	BETA	2.000	ELV-IB	.000
□	CP167	ELV-OB	.000	ALPHA	.000
◇	CP168				
△	CP169				
▷	CP170				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

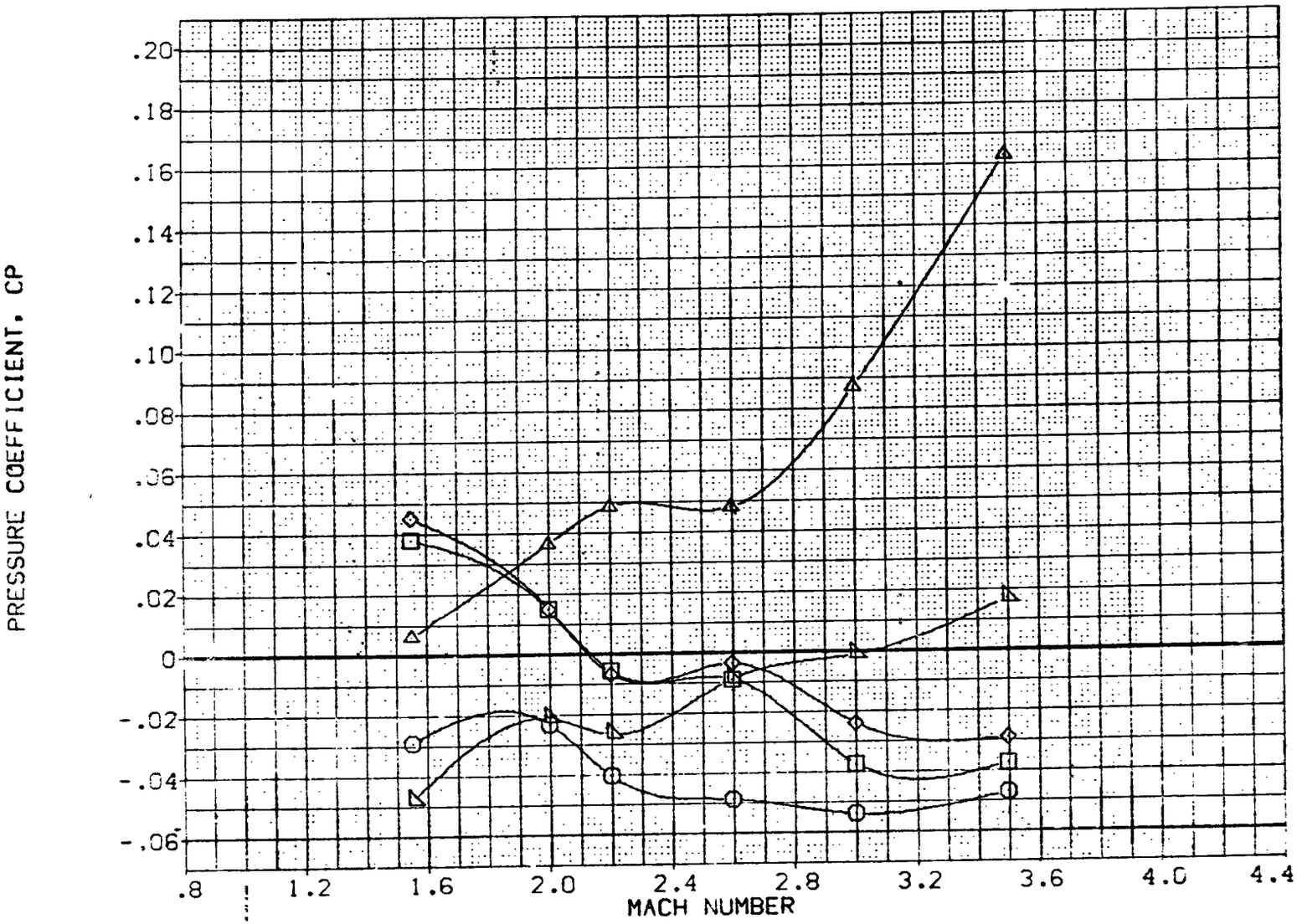


FIG. 103 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

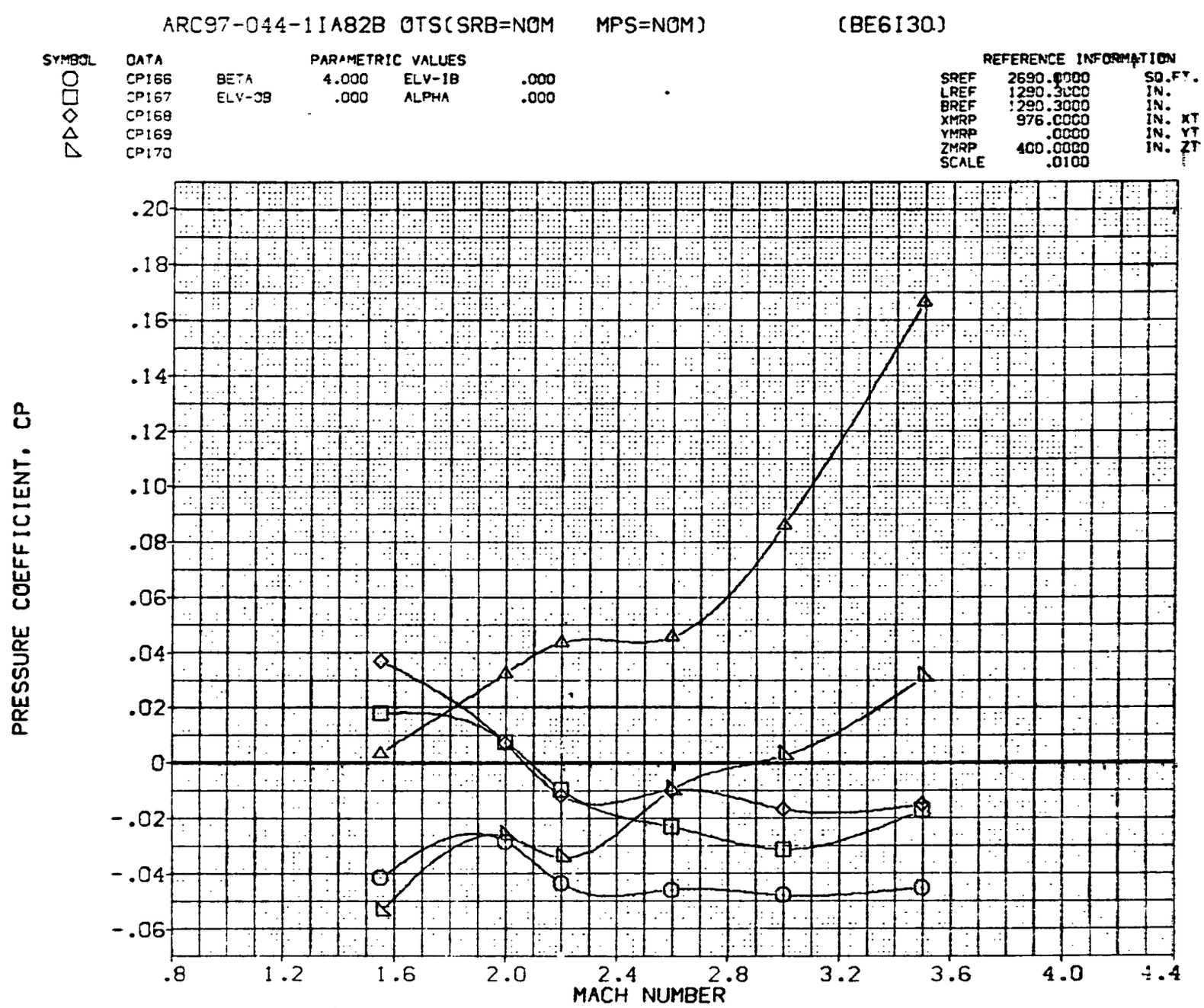


FIG. 103 0MS PRESSURE C0EFFICIENTS(LEFT) SRB=N0M, MPS=N0M

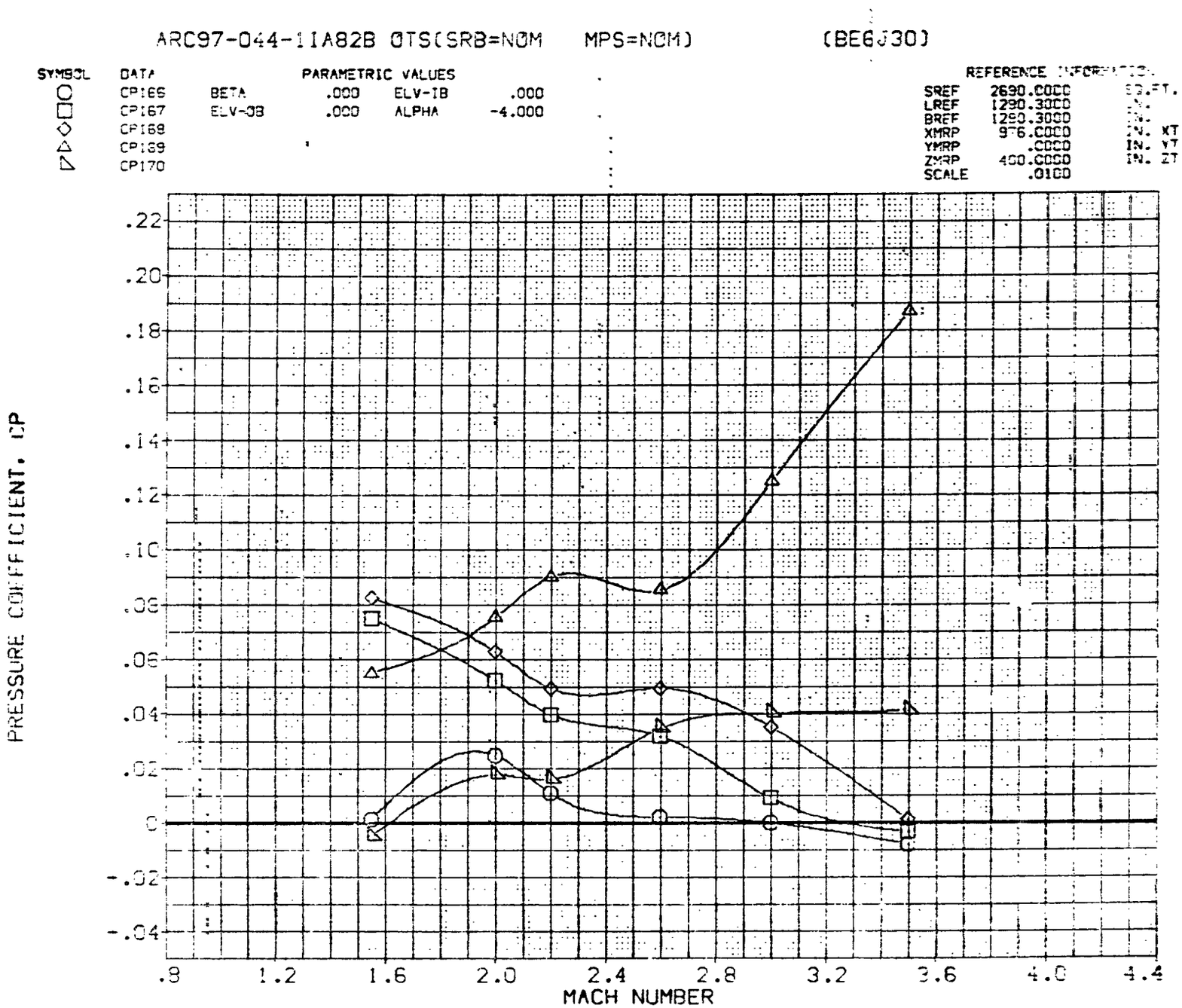


FIG. 103 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

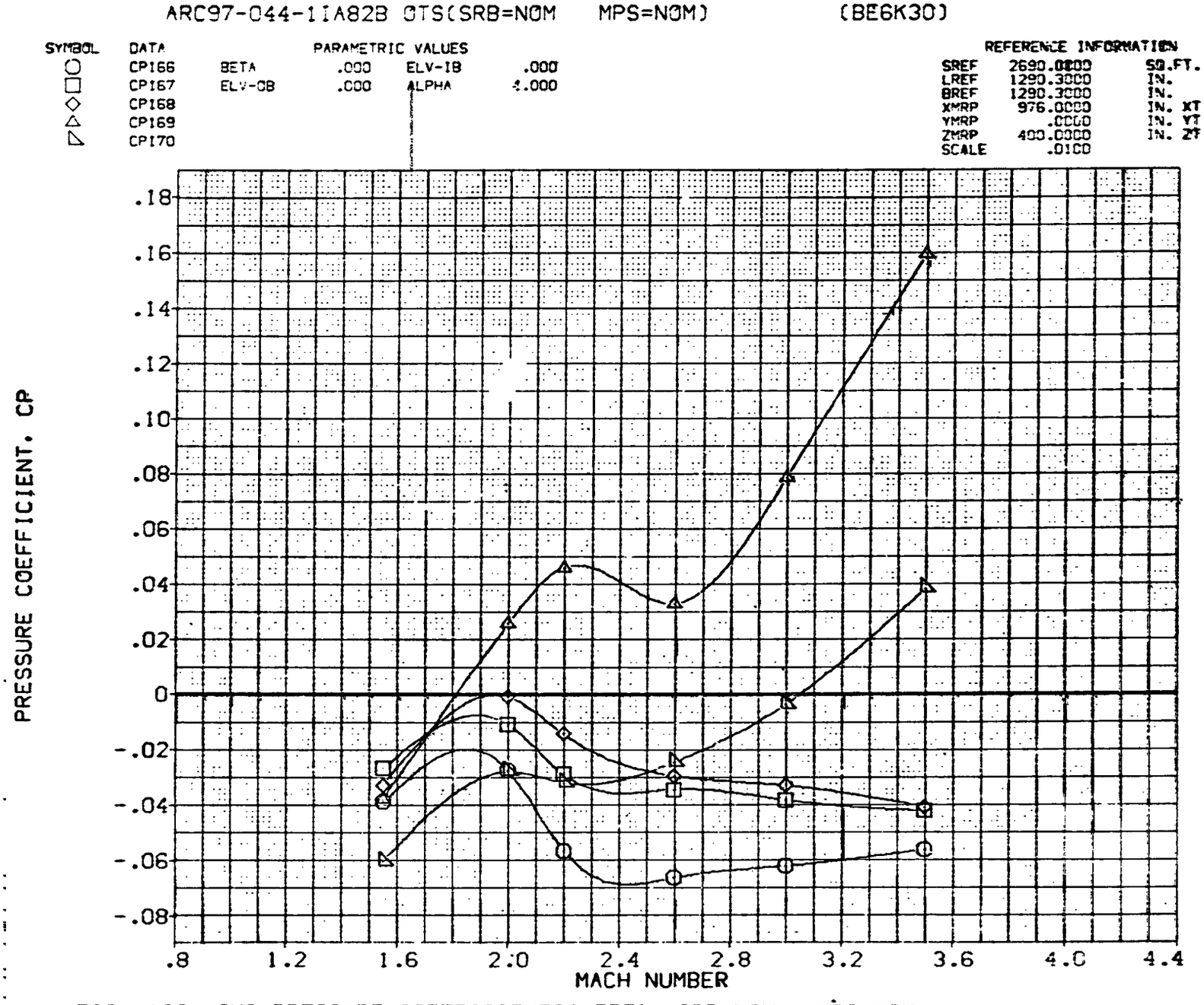


FIG. 103 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM+) (BE6I34)

SYMBOL	DATA		PARAMETRIC VALUES		
○	CP166	BETA	-4.000	ELV-IB	.000
□	CP167	ELV-OB	.000	ALPHA	.000
◇	CP169				
△	CP169				
▷	CP170				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

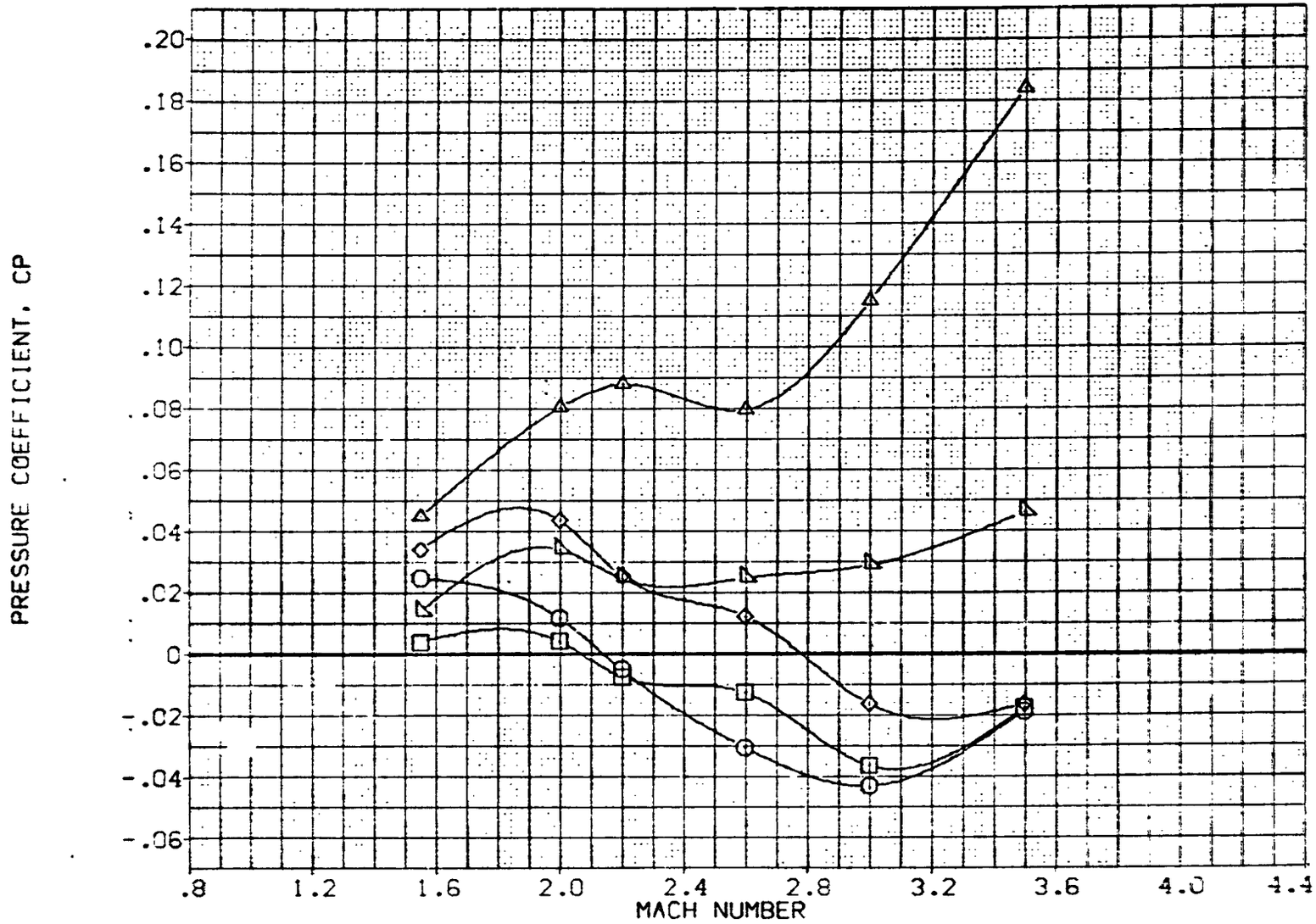


FIG. 104 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM+

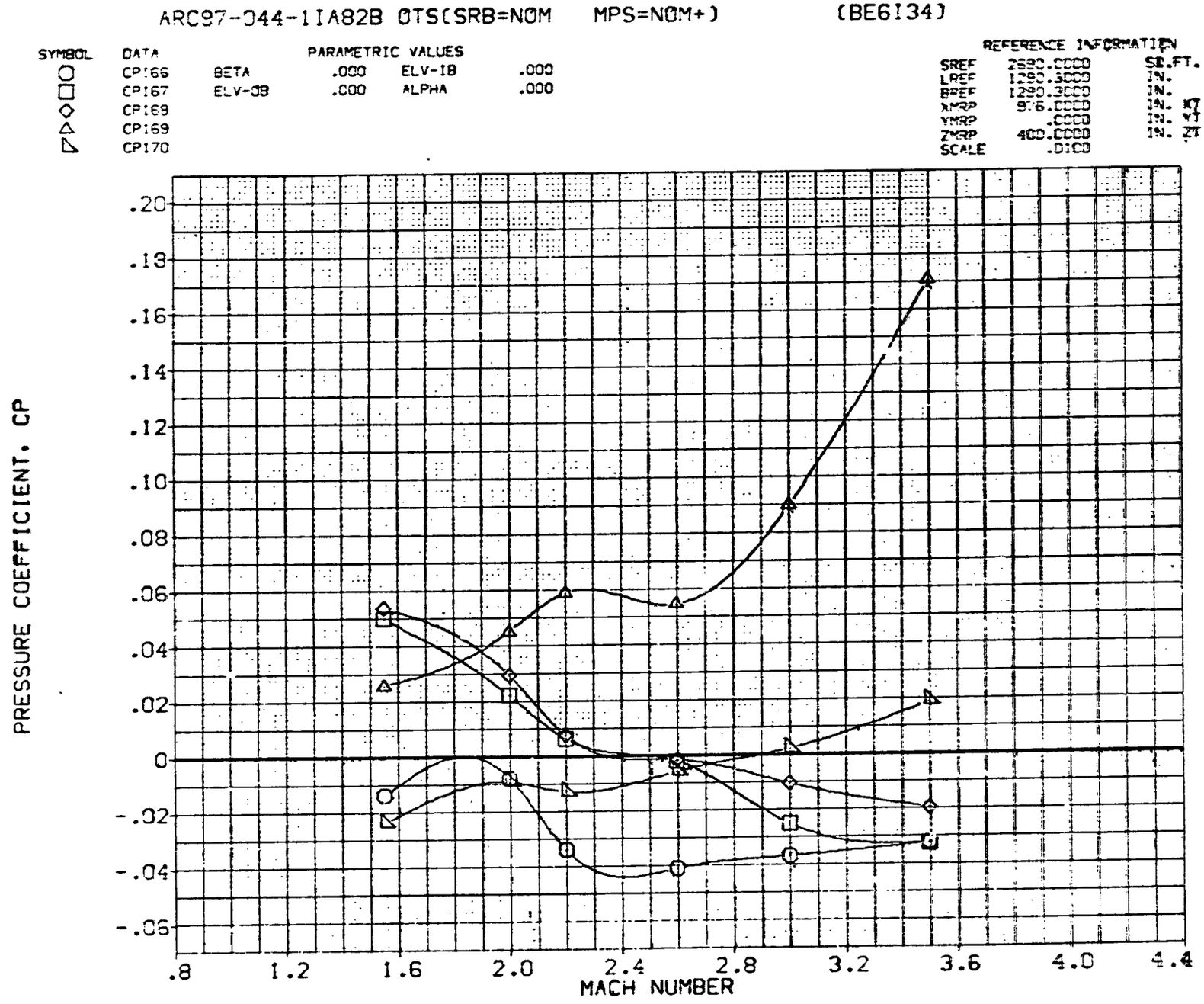


FIG. 104 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM+

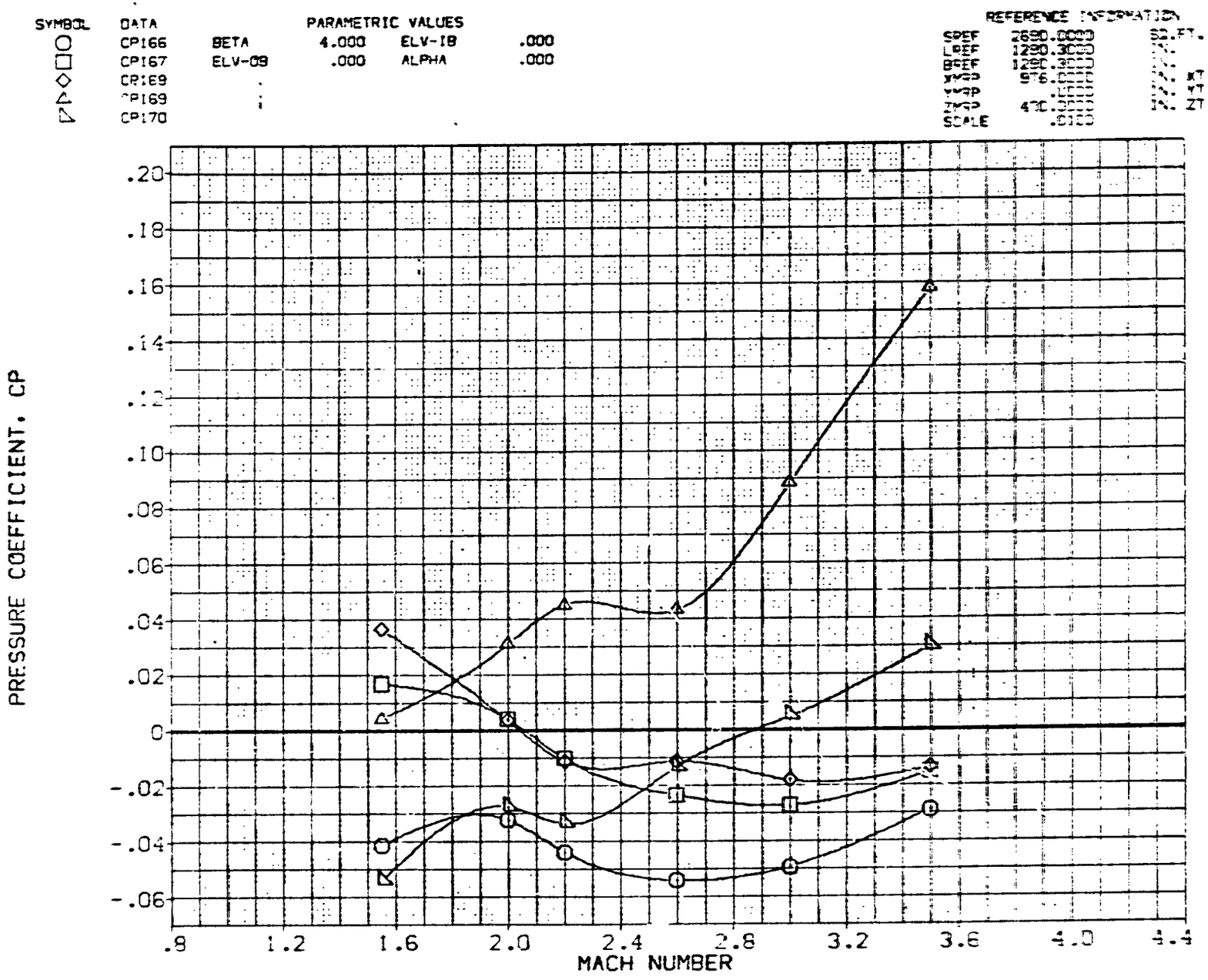


FIG. 104 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM+

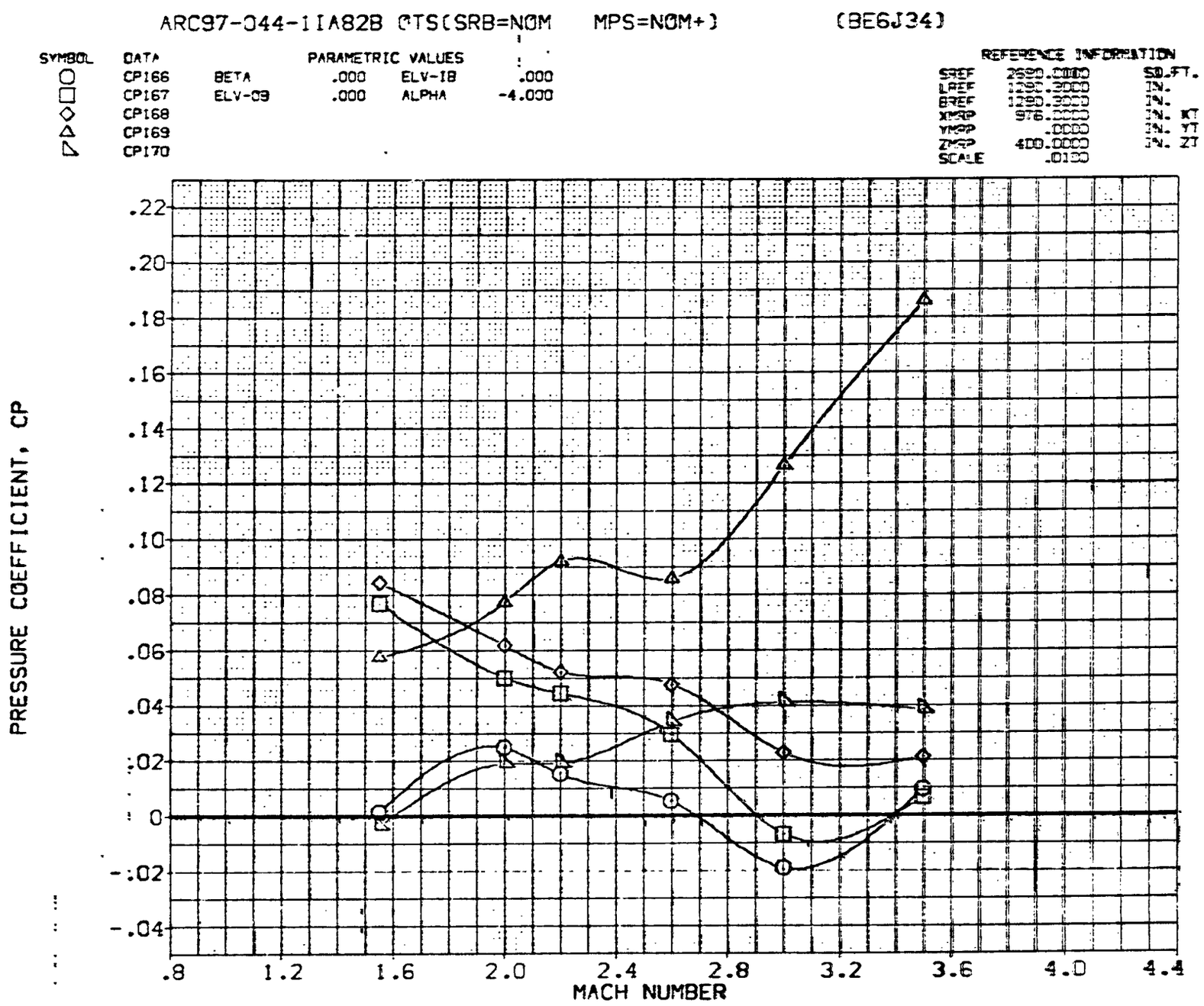


FIG. 104 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM. MPS=NOM+

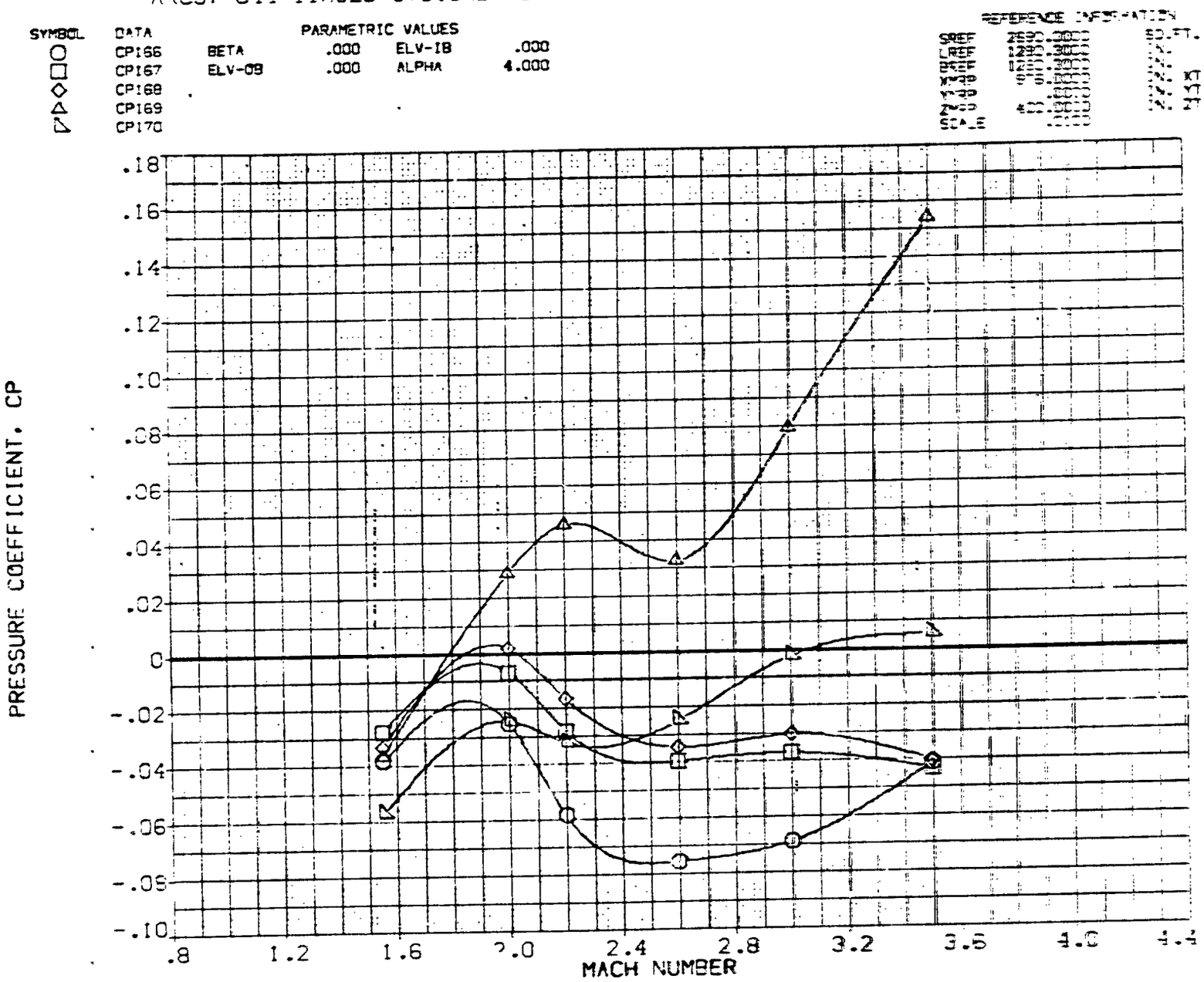


FIG. 104 OMS PRESSURE COEFFICIENTS(LEFT) SRB=NOM, MPS=NOM+

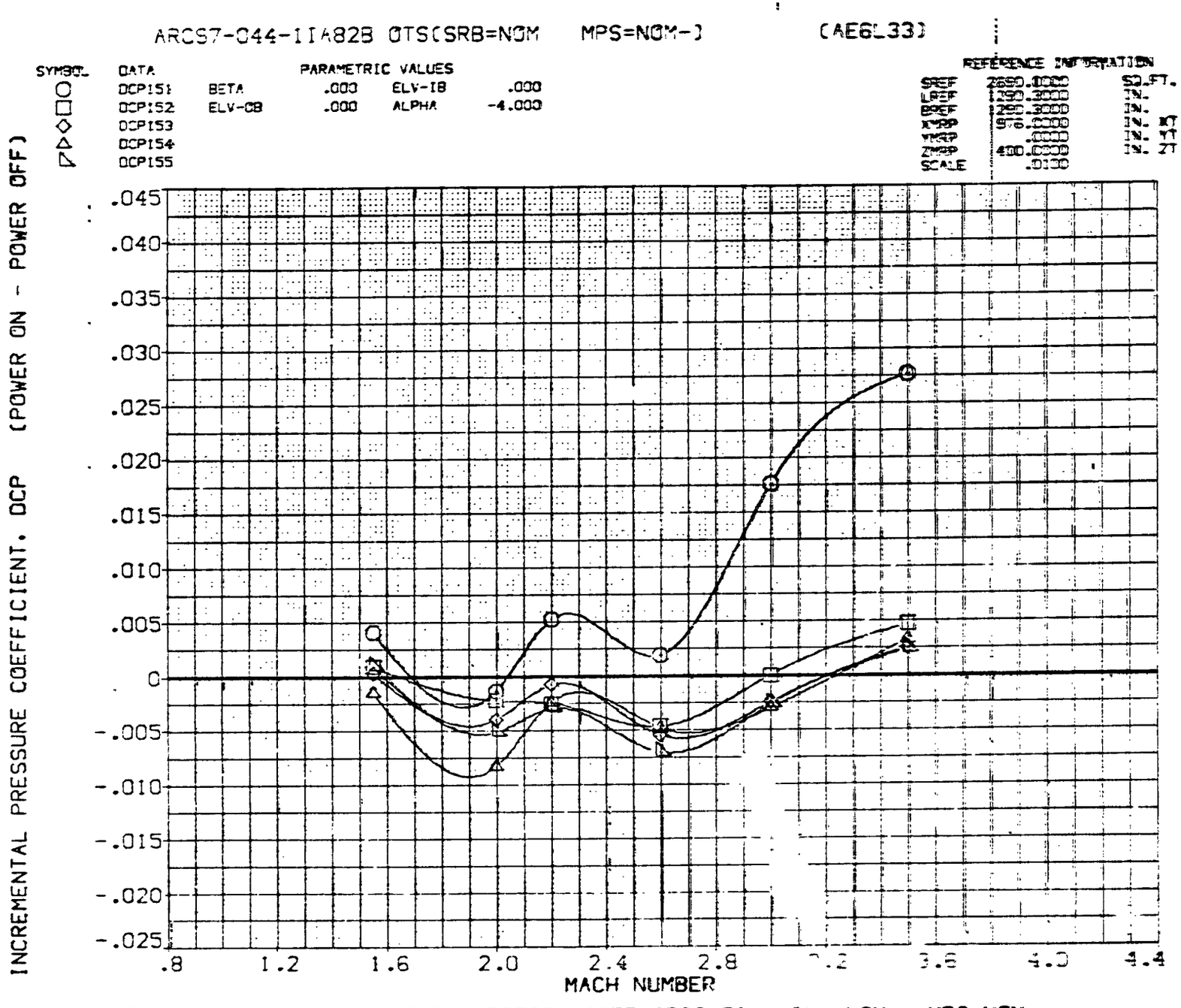


FIG. 105 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

ARC97-044-11A82B OTS(SRB=NOM MPS=NOM-) (AE6M33)

SYMBOL	DATA		PARAMETRIC VALUES		
○	DCP151	BETA	-4.000	ELV-IB	.000
□	DCP152	ELV-OB	.000	ALPHA	.000
◇	DCP153				
△	DCP154				
▽	DCP155				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

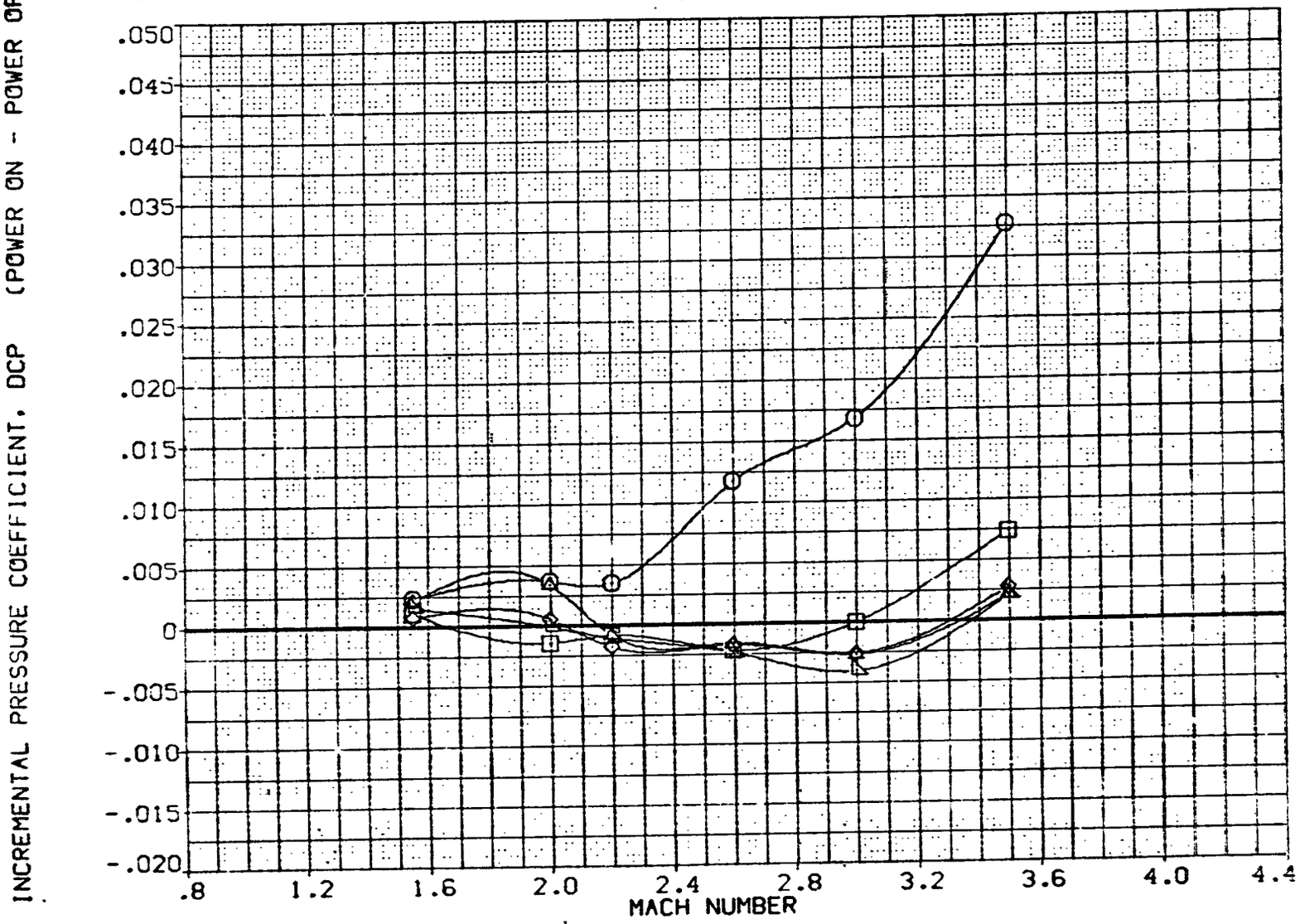


FIG. 105 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

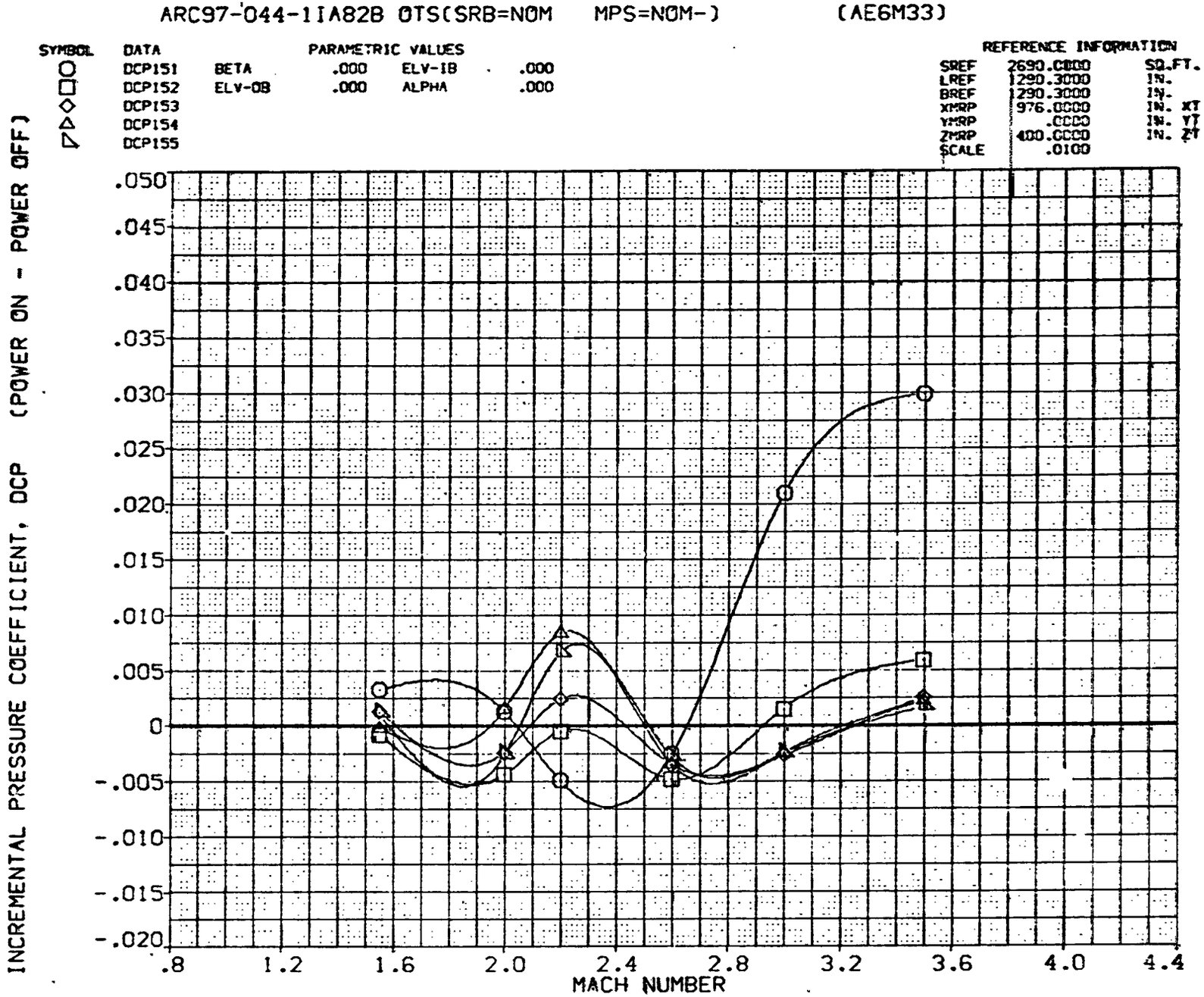


FIG. 105 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

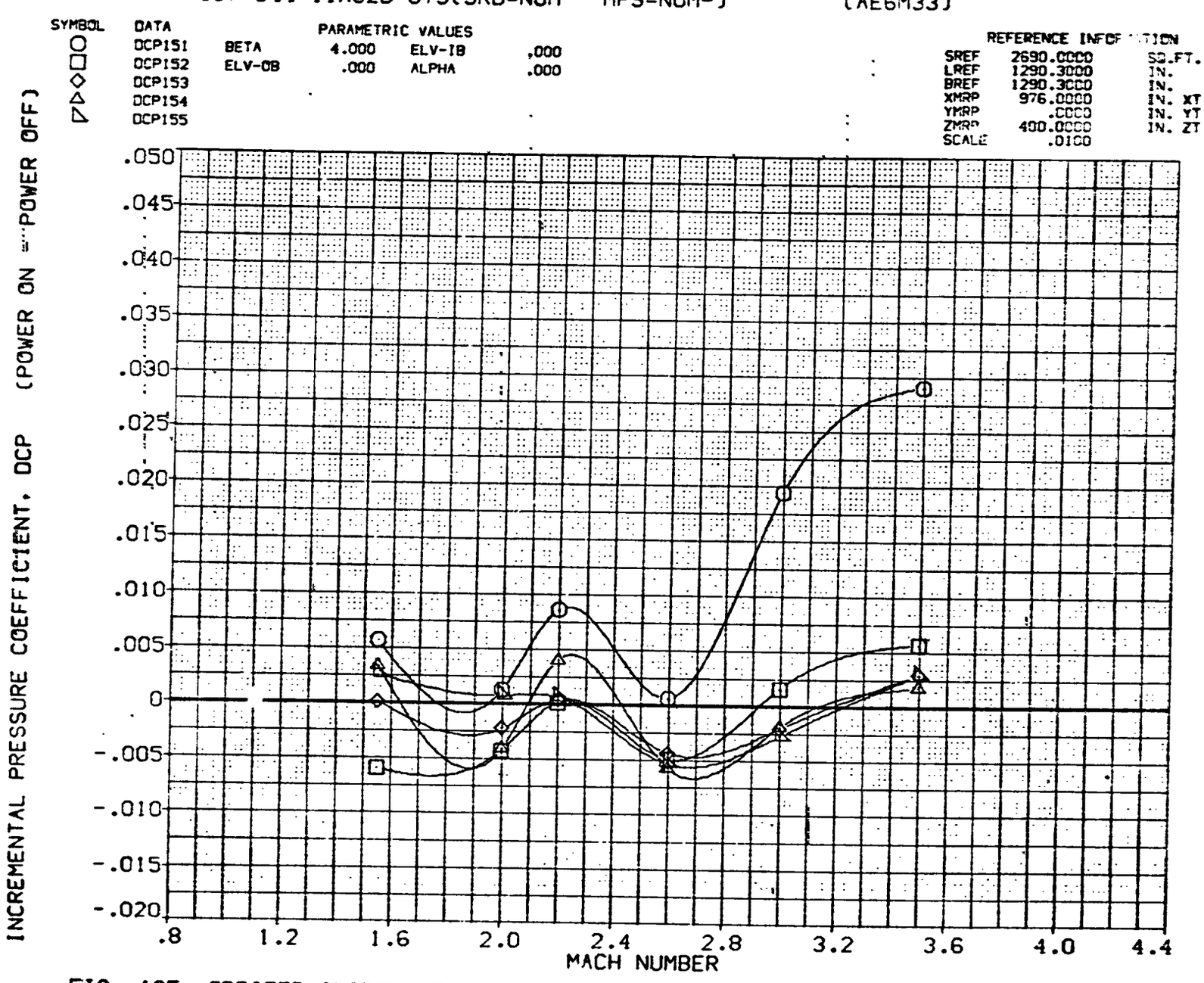


FIG. 105 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

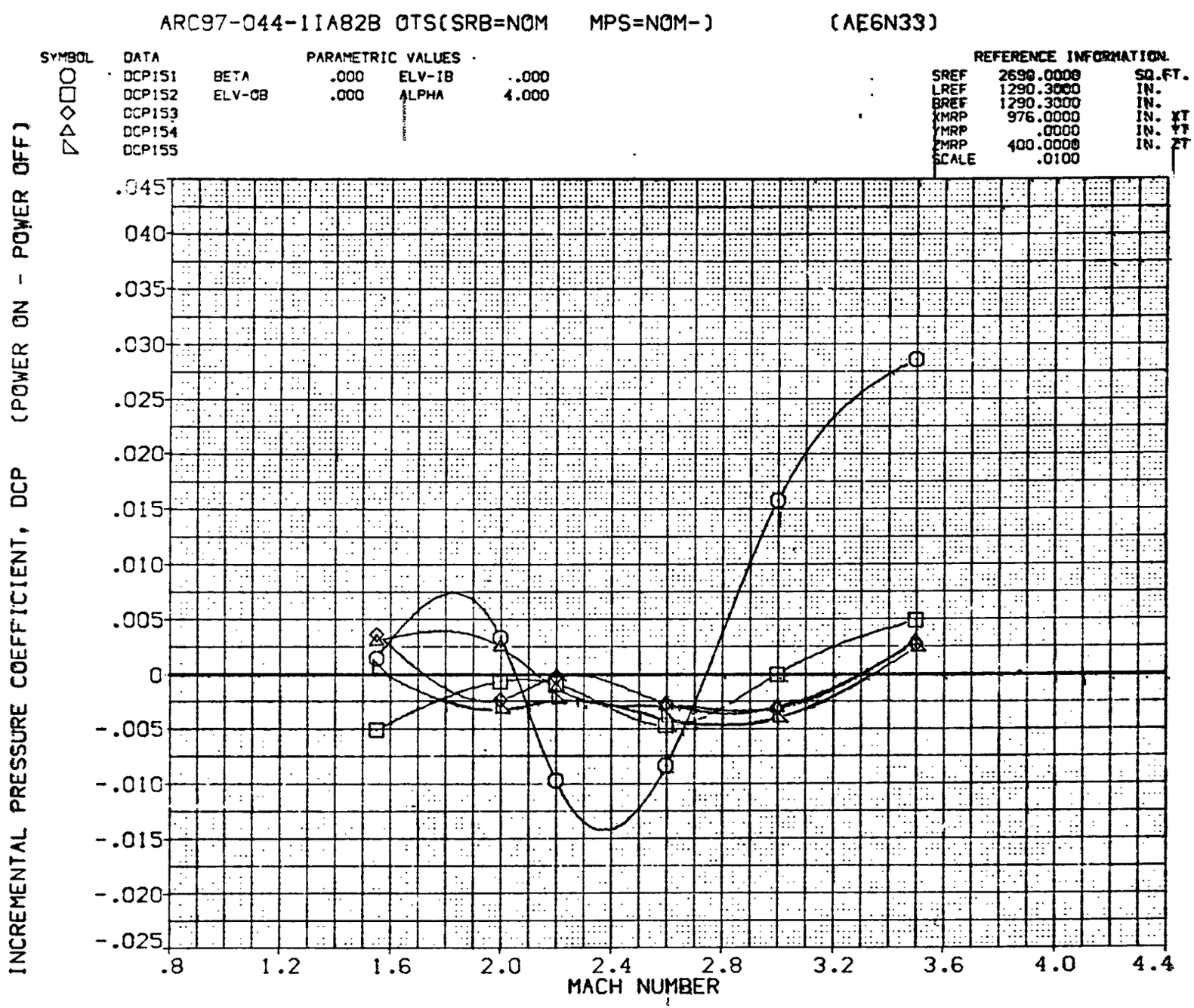


FIG. 105, ORBITER INCREMENTAL PRESS, COEF.(RIGHT), SRB=NOM, MPS=NOM-

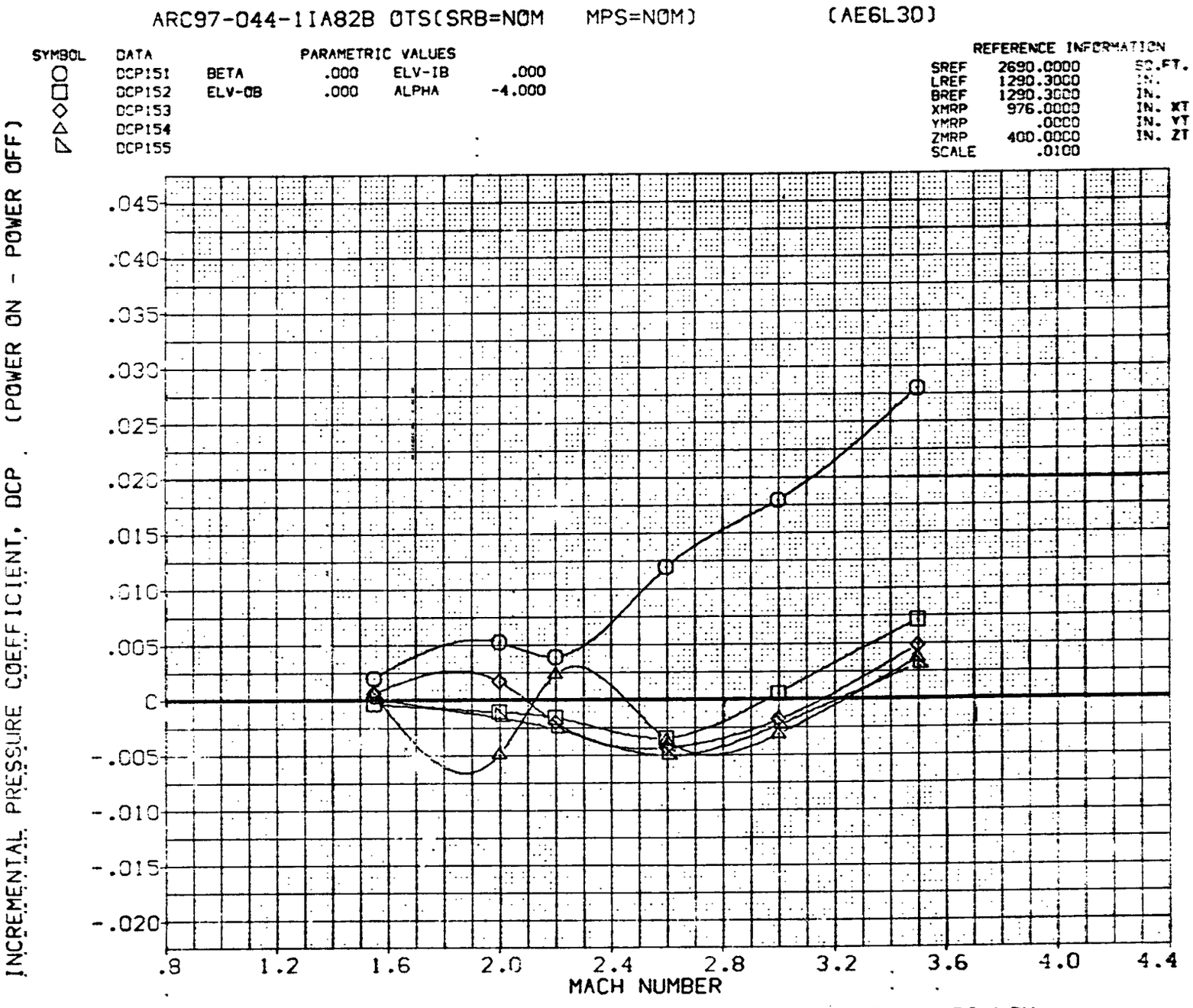


FIG. 106 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

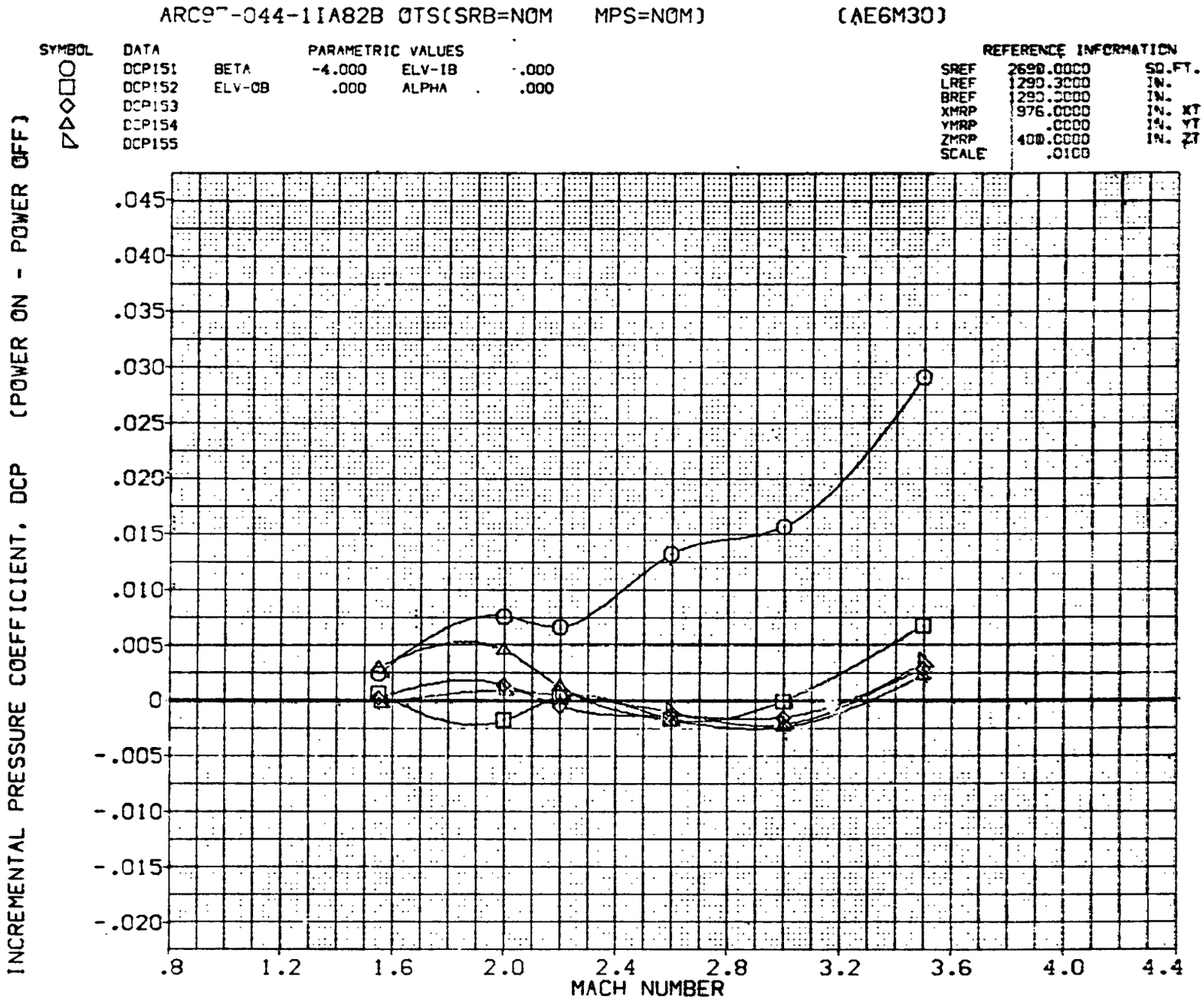


FIG. 106 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

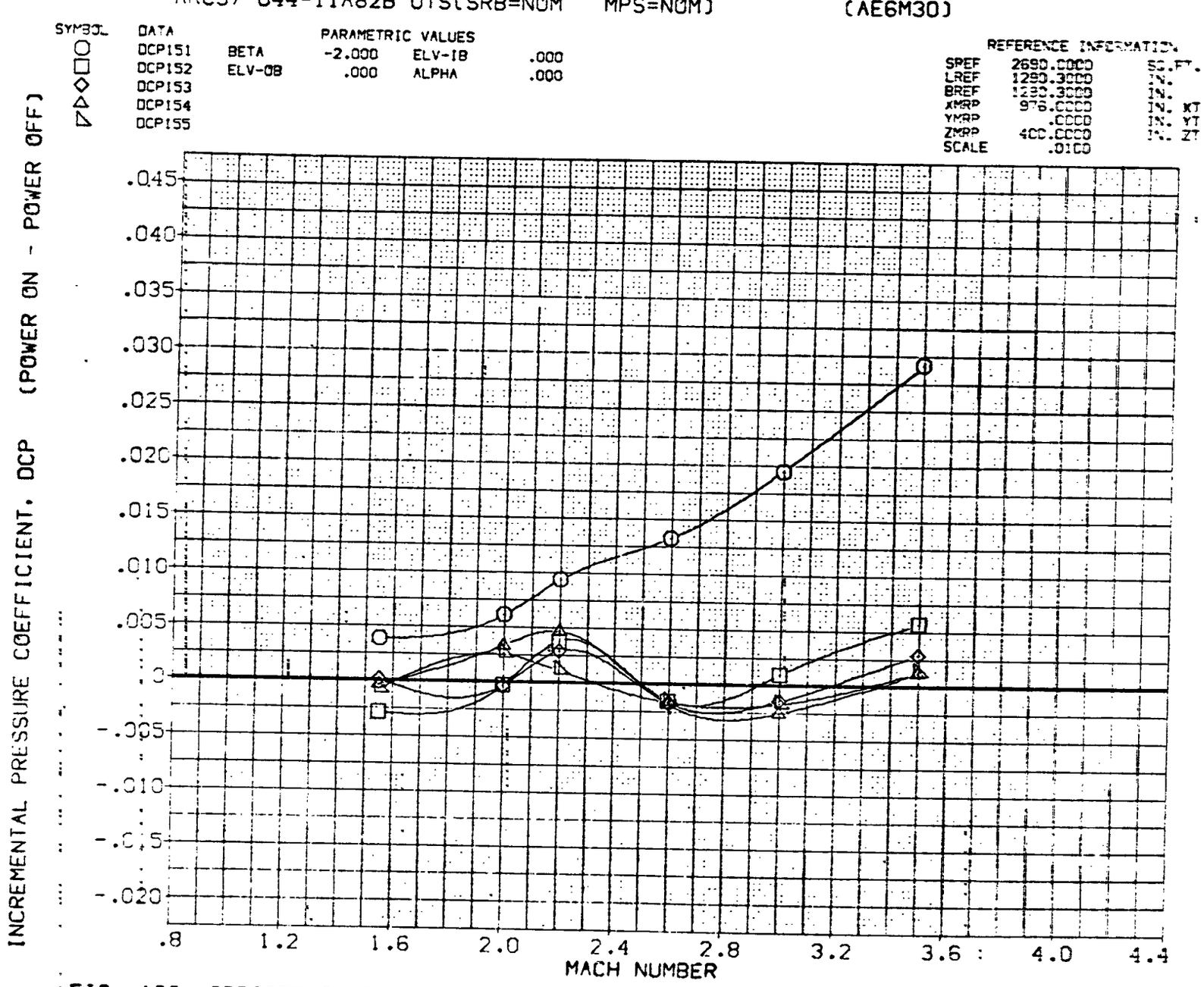


FIG. 106 ORBITER INCREMENTAL PRESS. COEF.(RIGHT). SRB=NOM, MPS=NOM

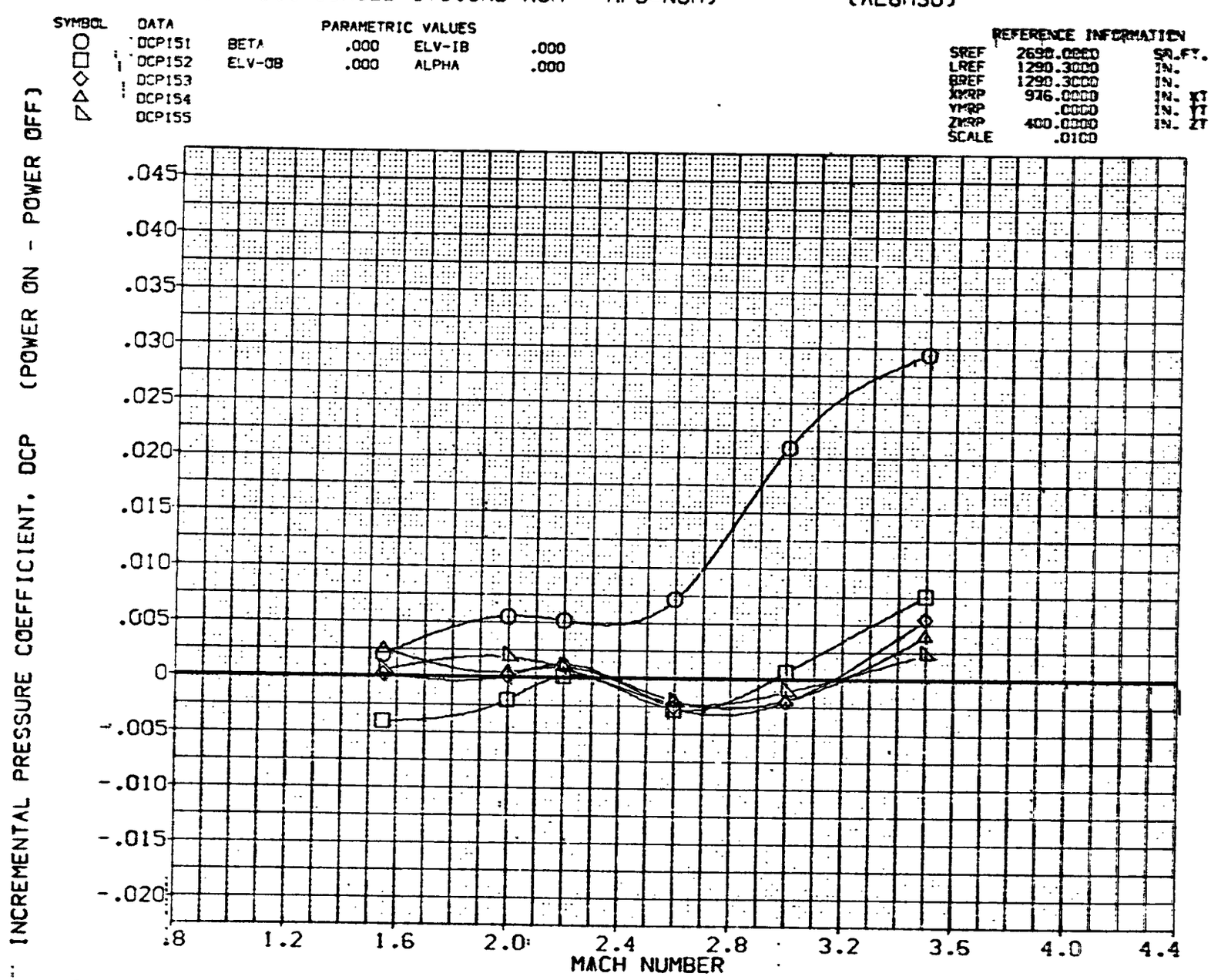


FIG. 106 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

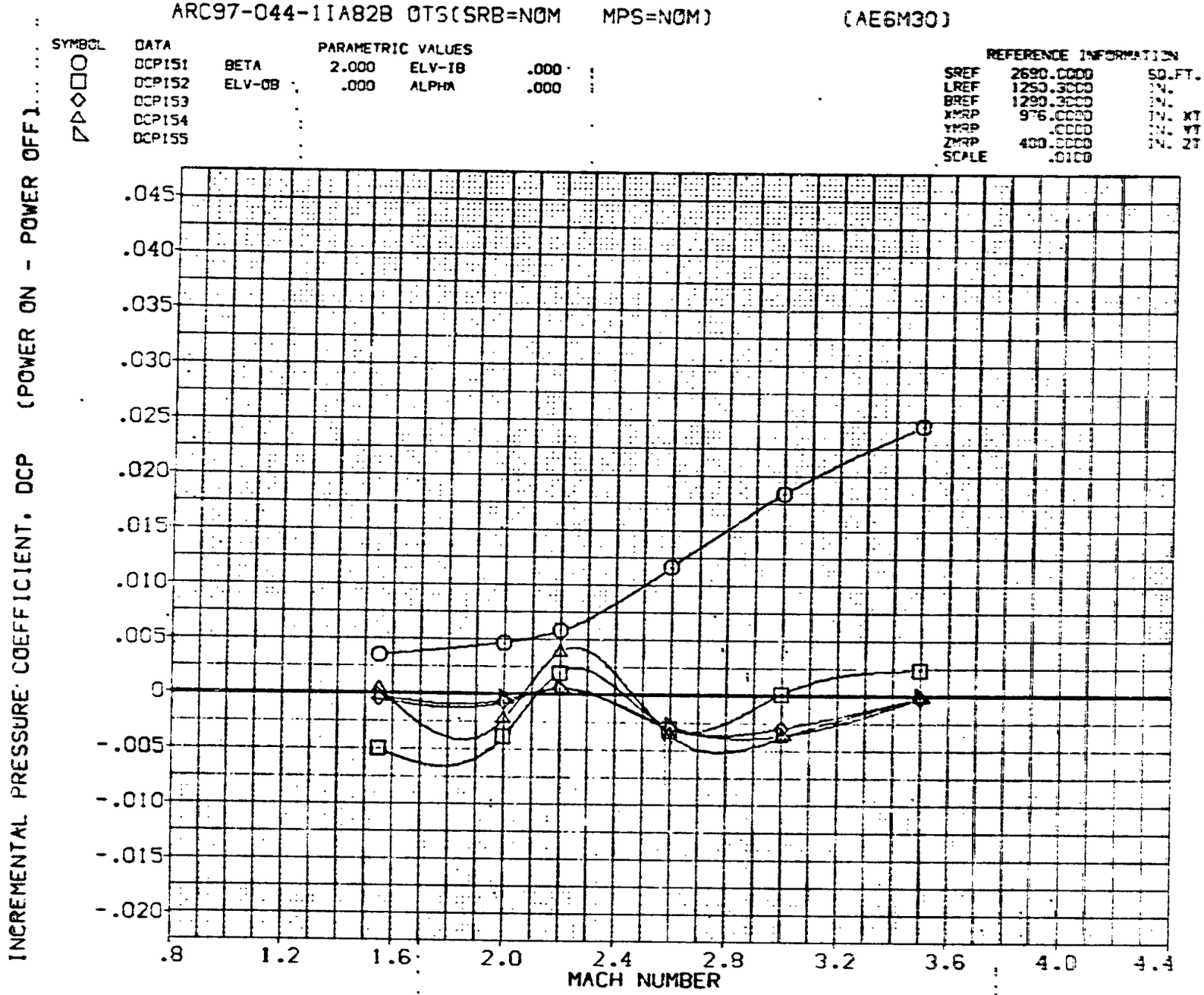


FIG. 106 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

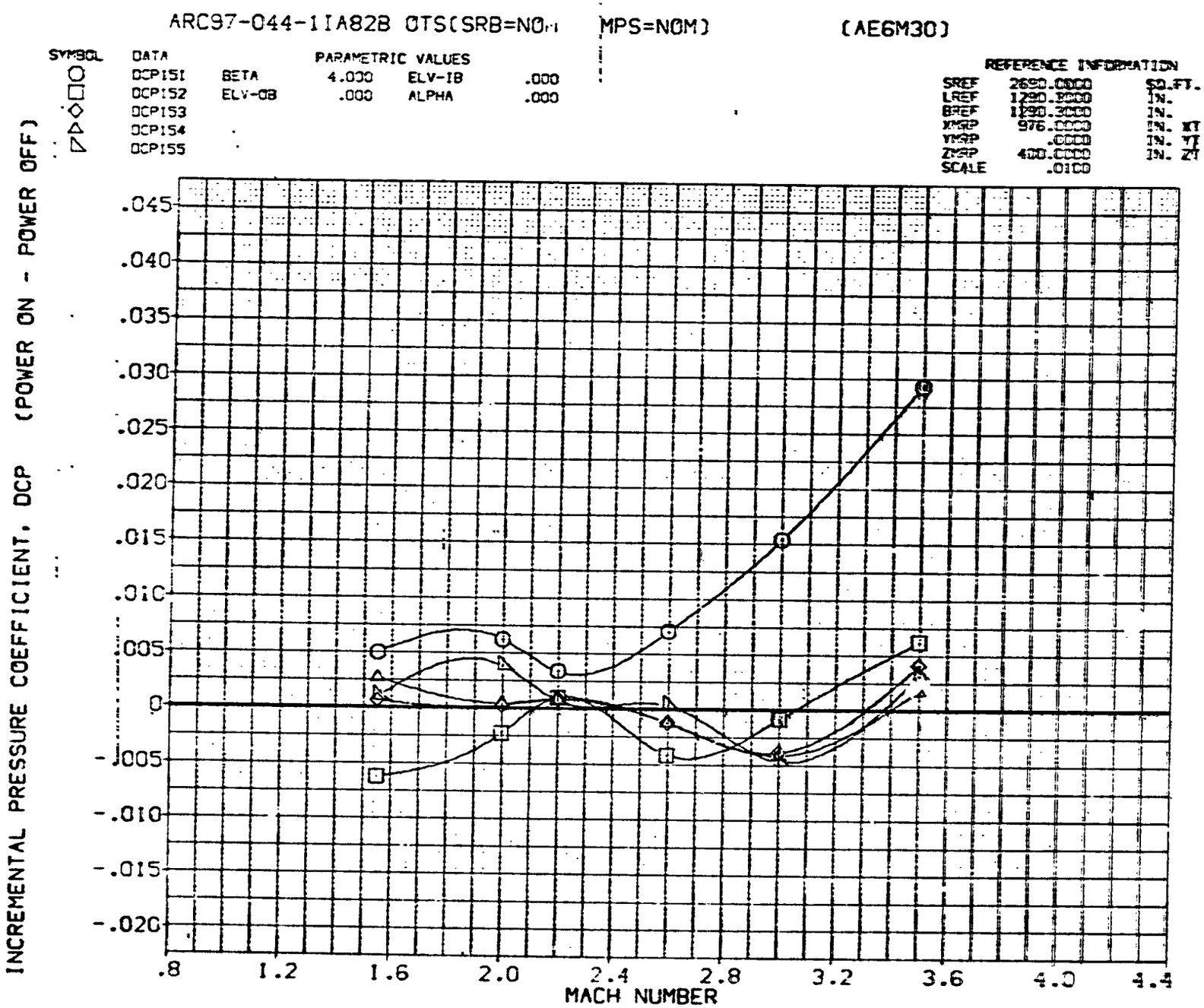


FIG. 106 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

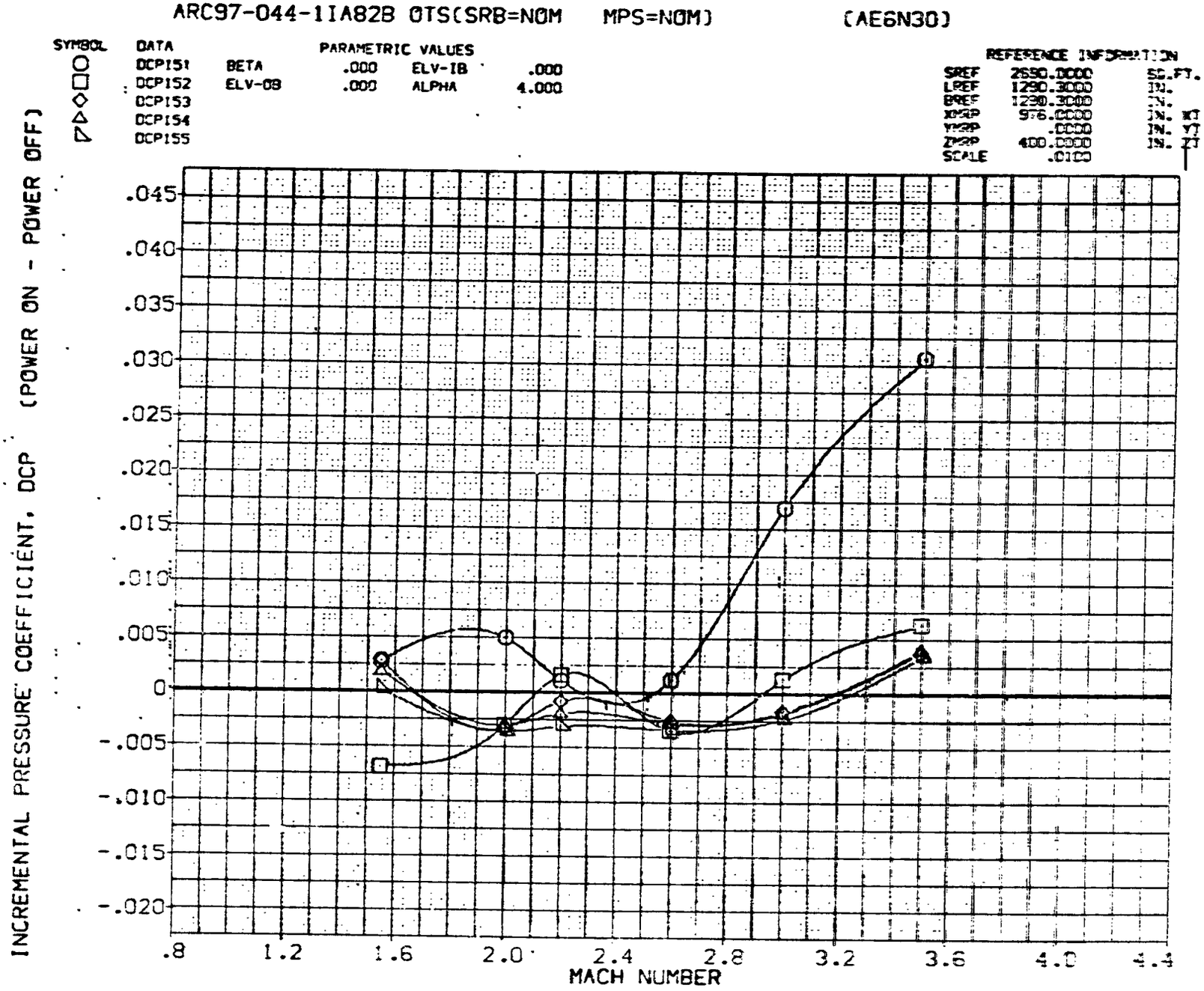


FIG. 106 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

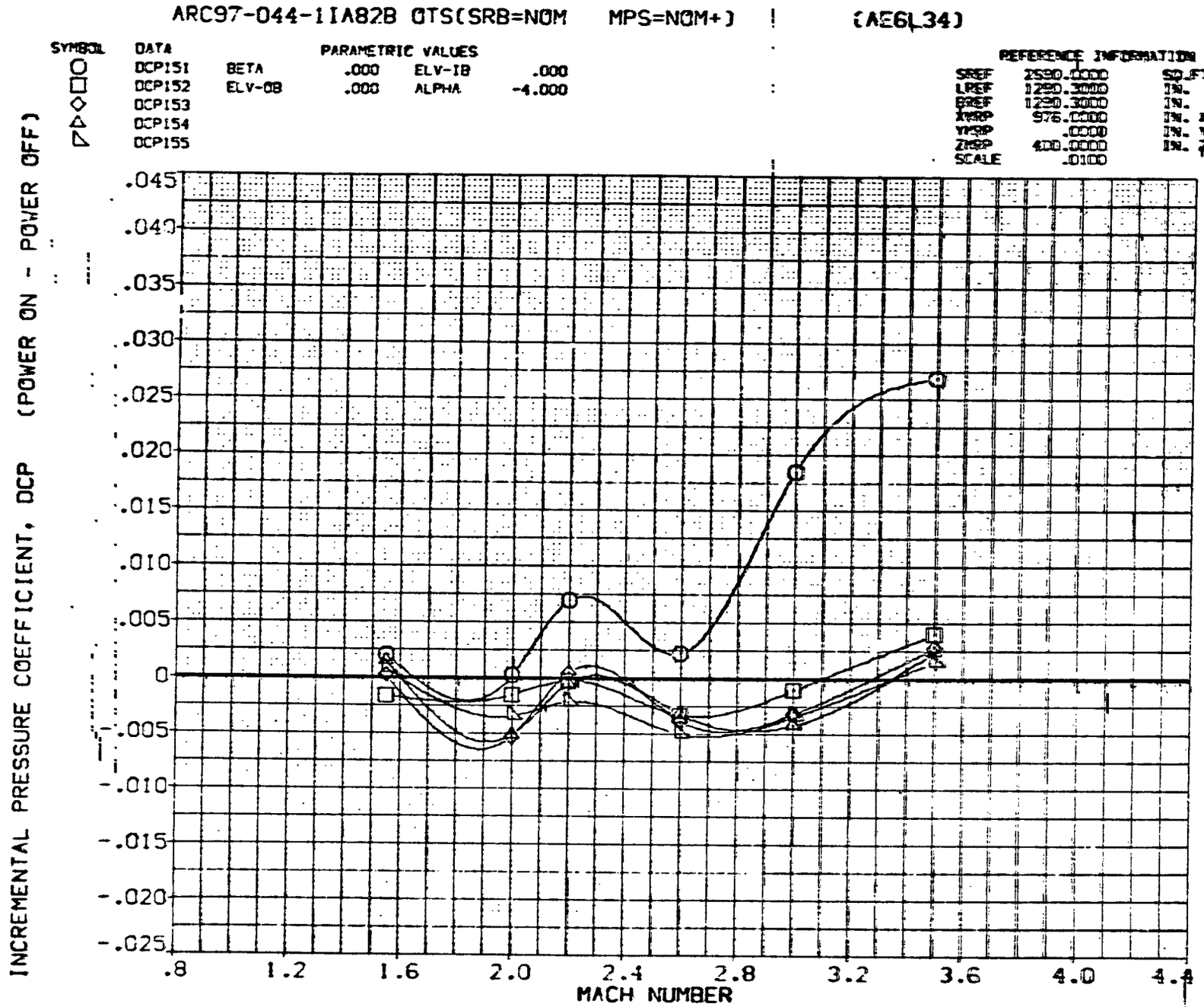


FIG. 107 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM+

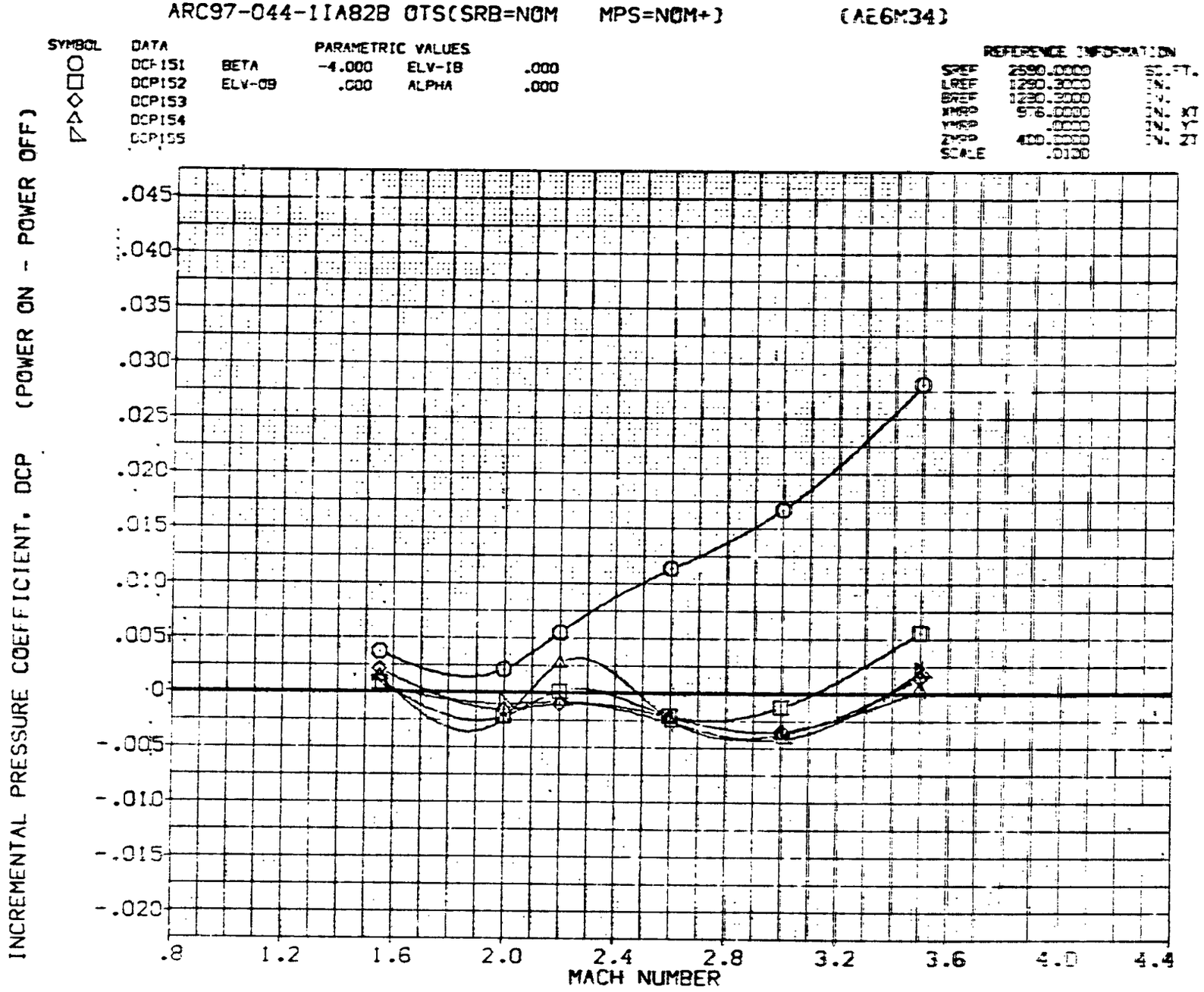


FIG. 107 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM+

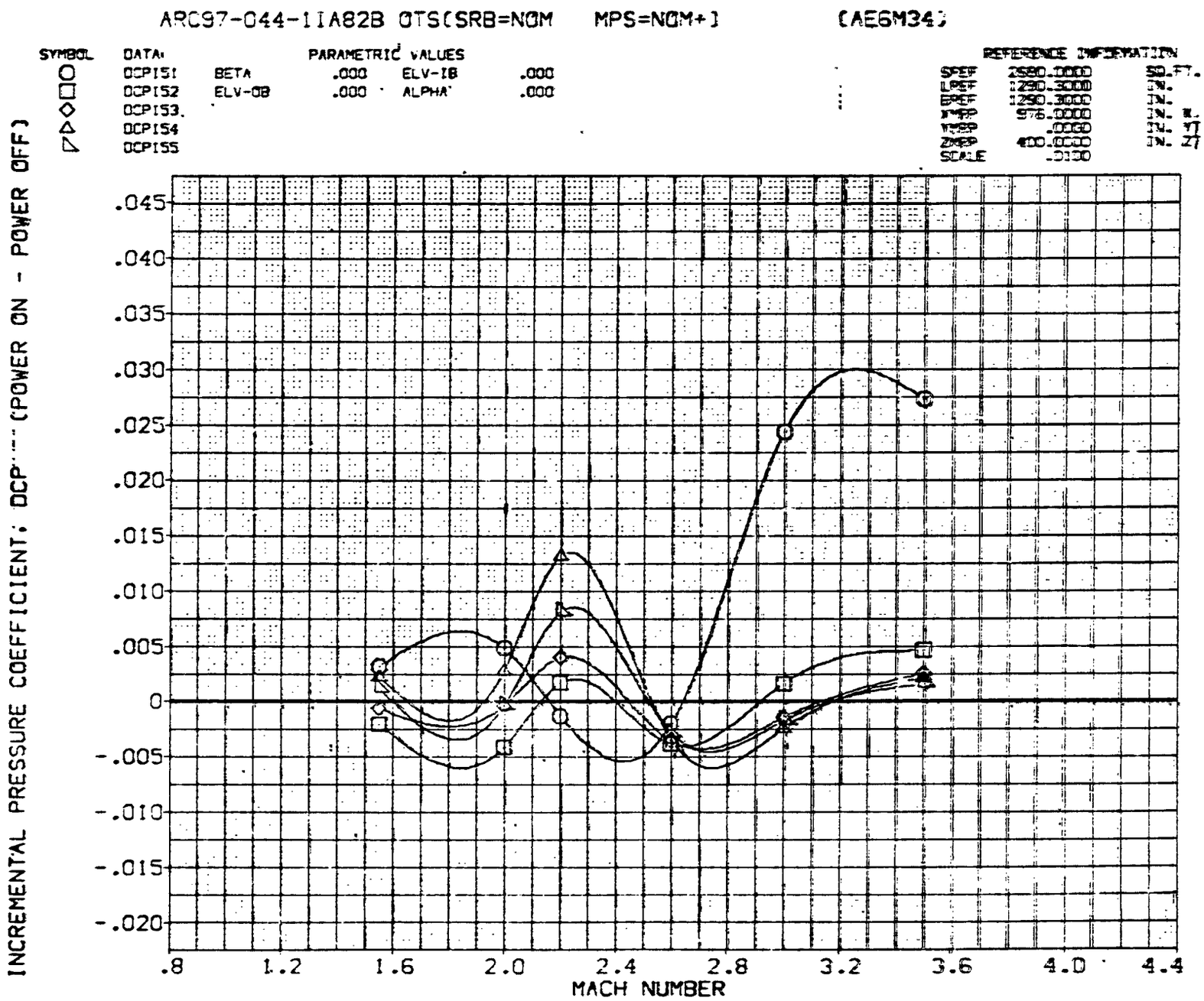


FIG. 107 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM+

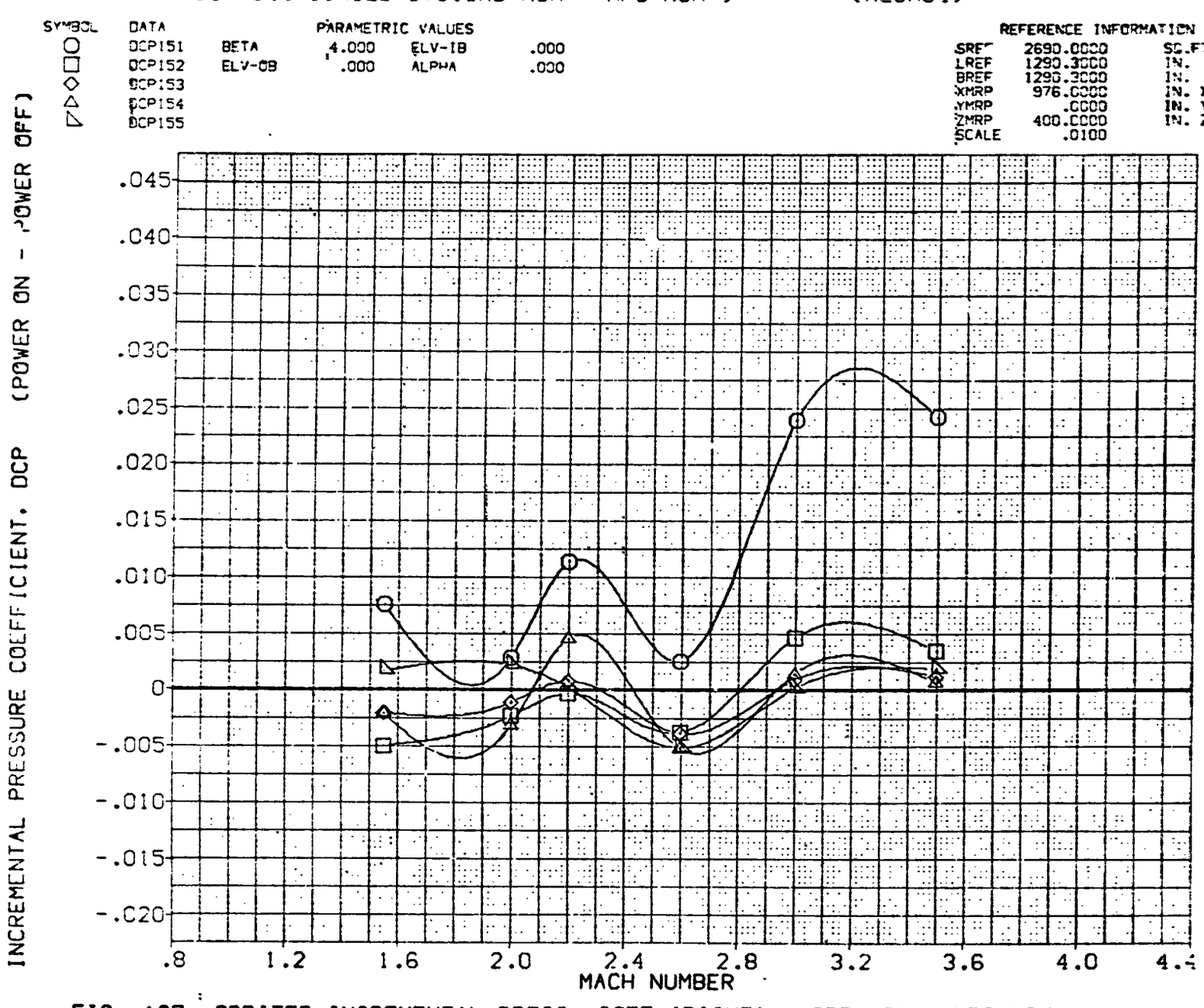


FIG. 107 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM+

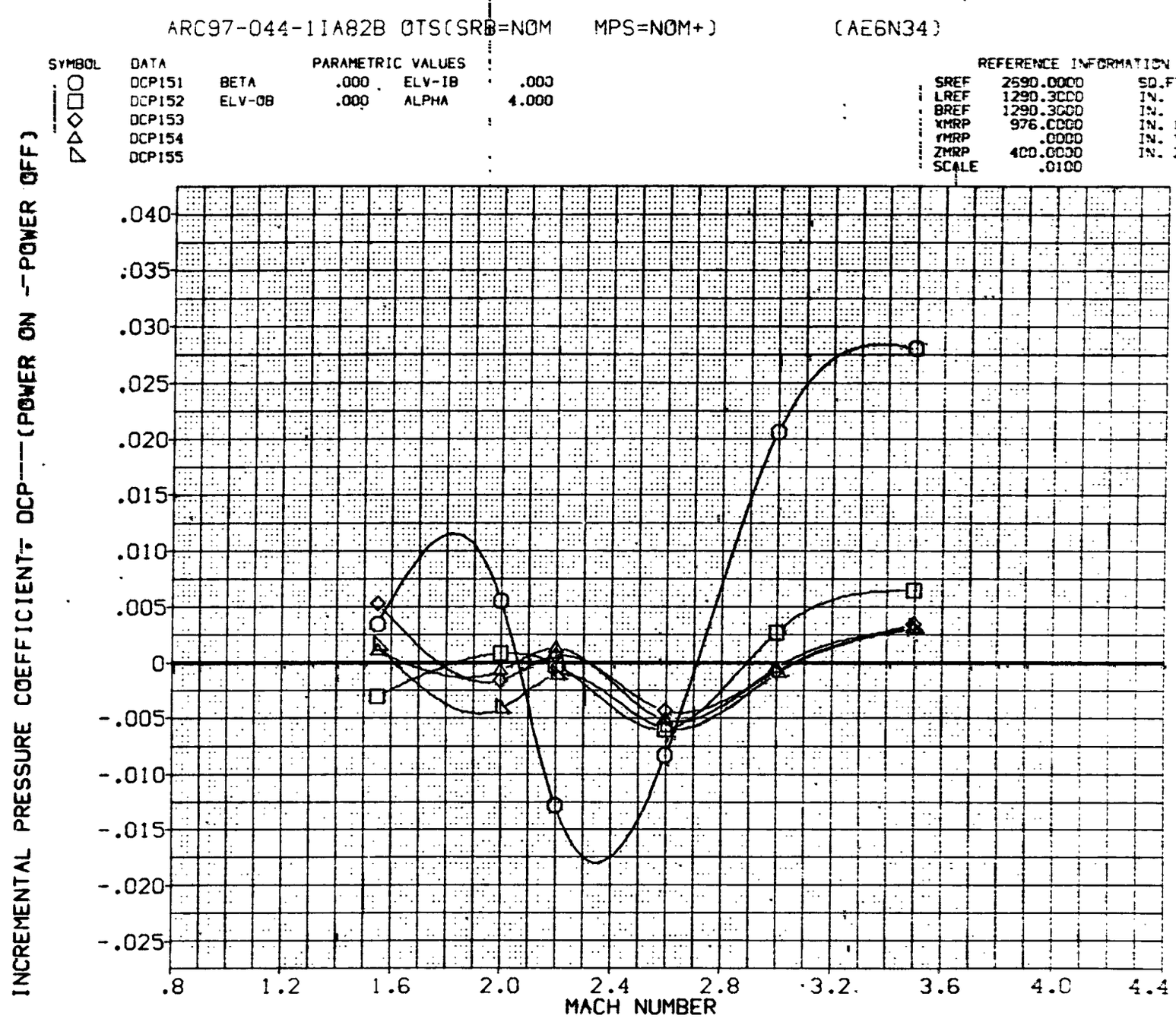


FIG. 107 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM+

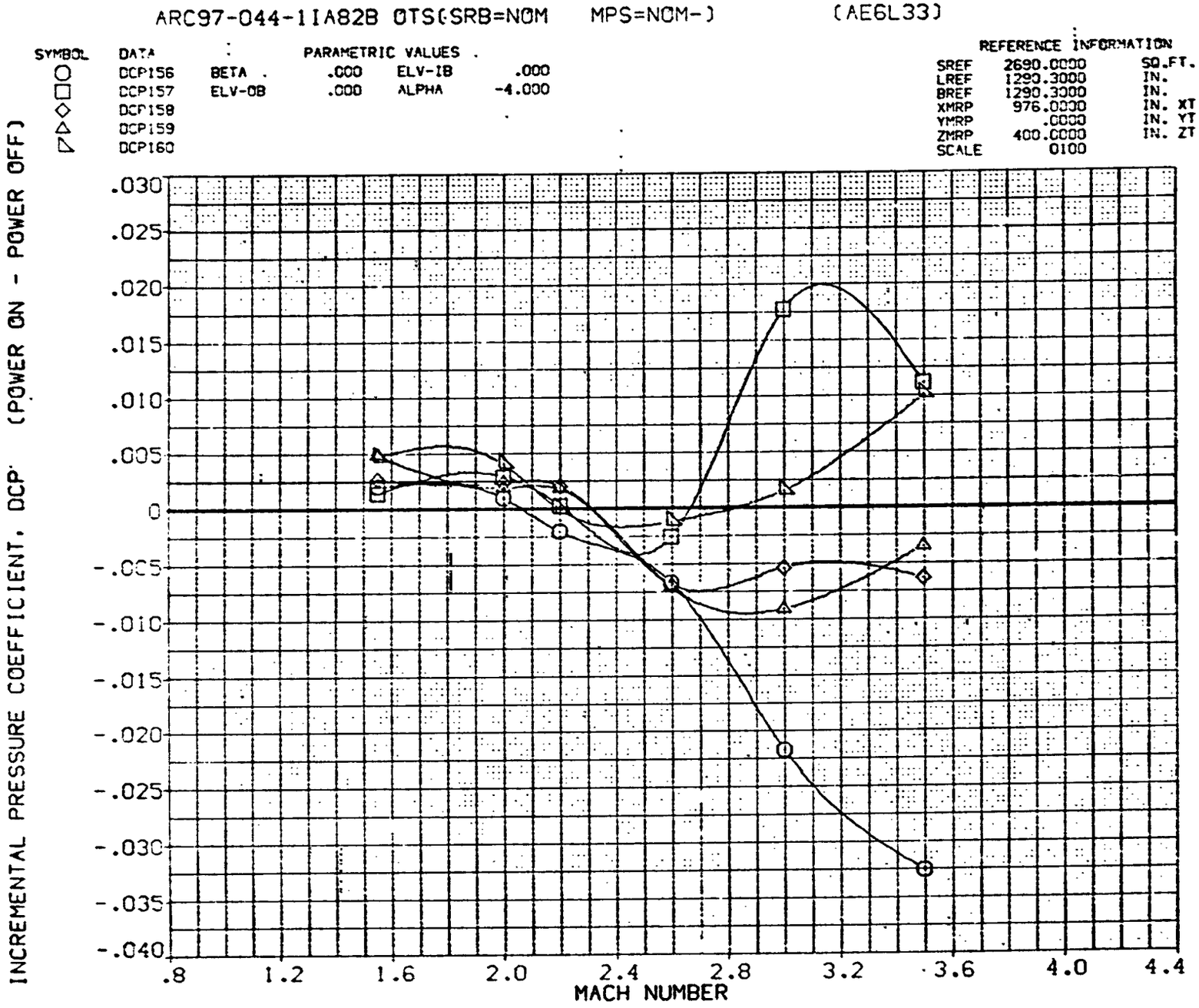


FIG. 108 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

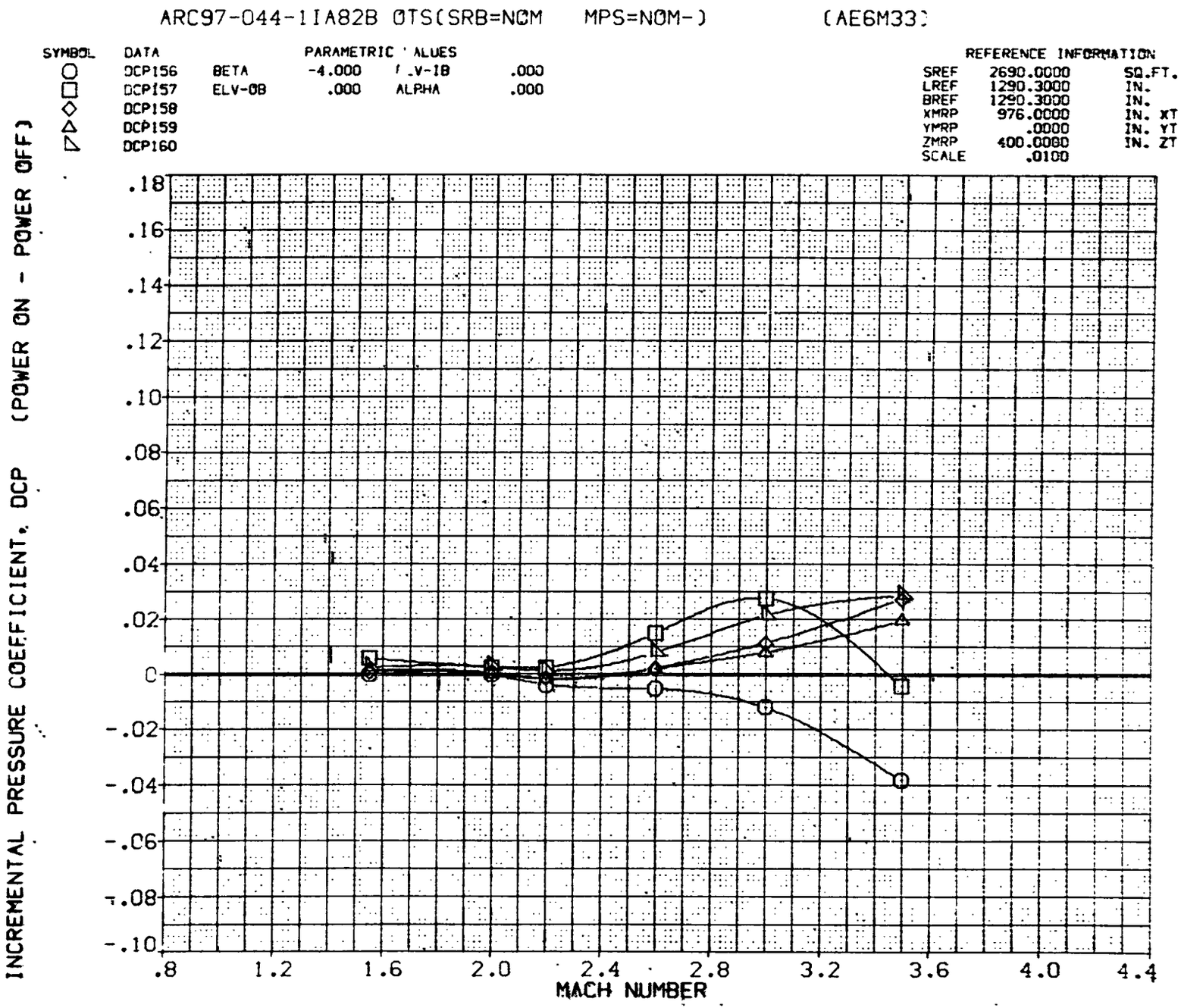


FIG. 108 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

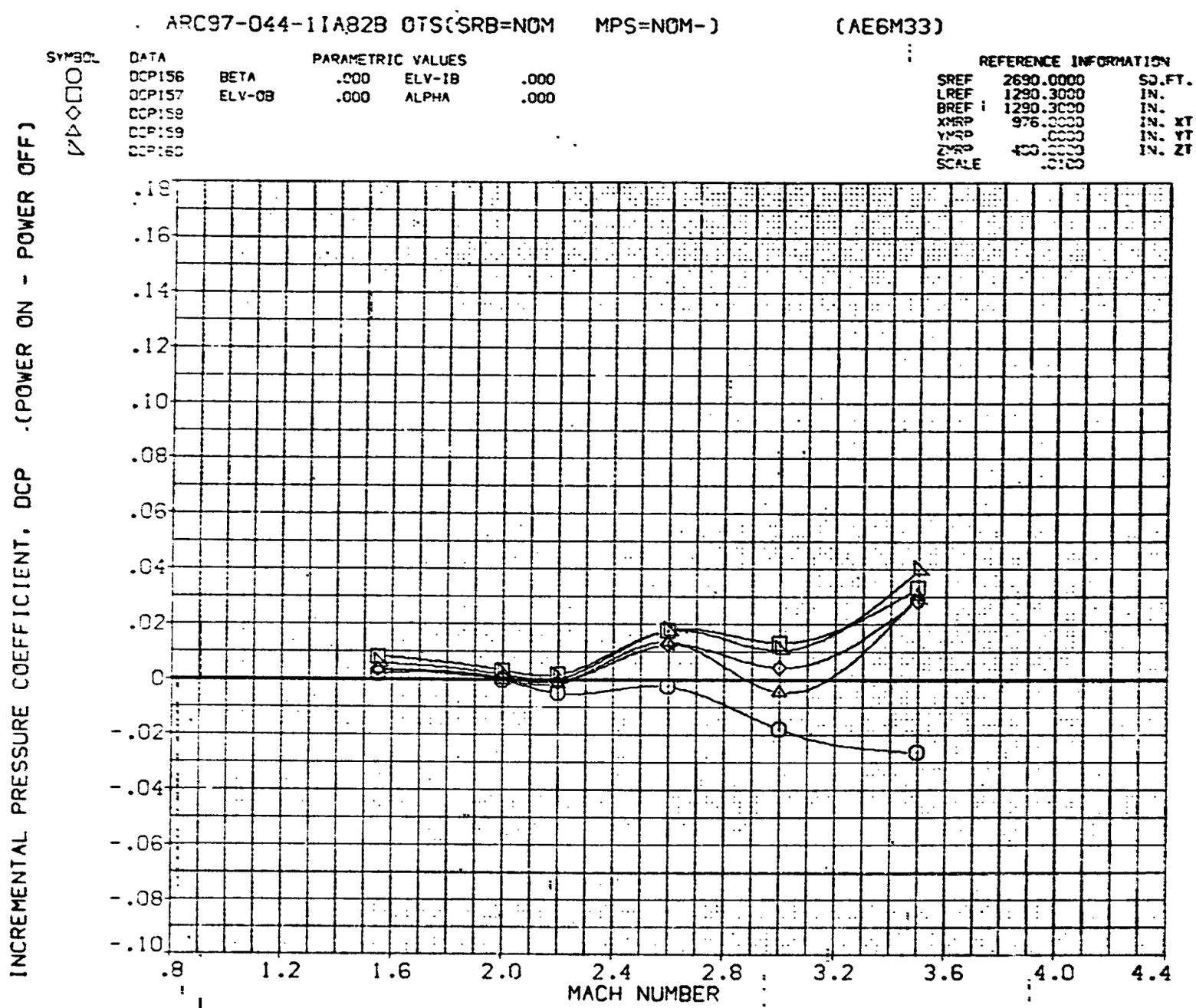


FIG. 108 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

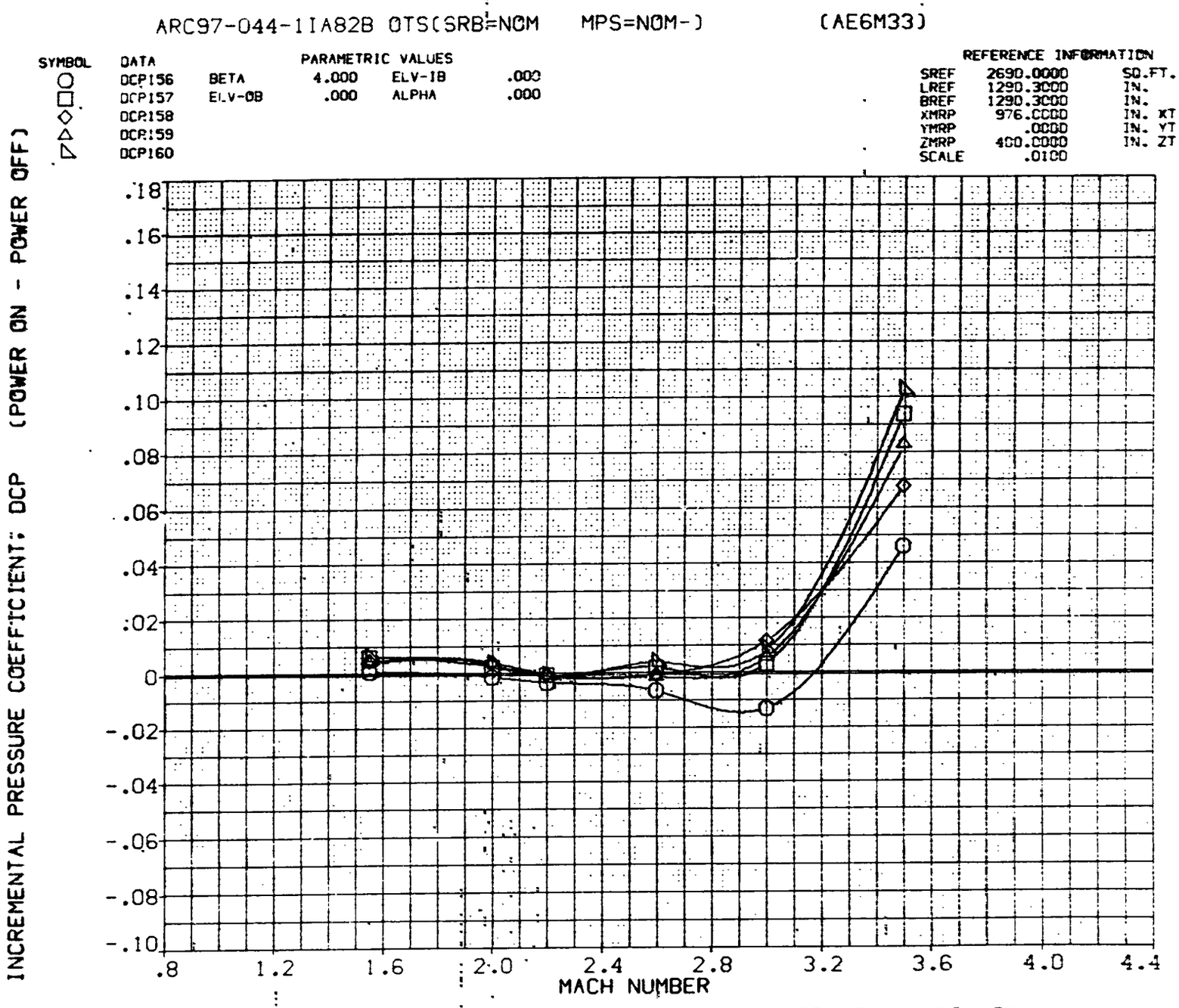


FIG. 108 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

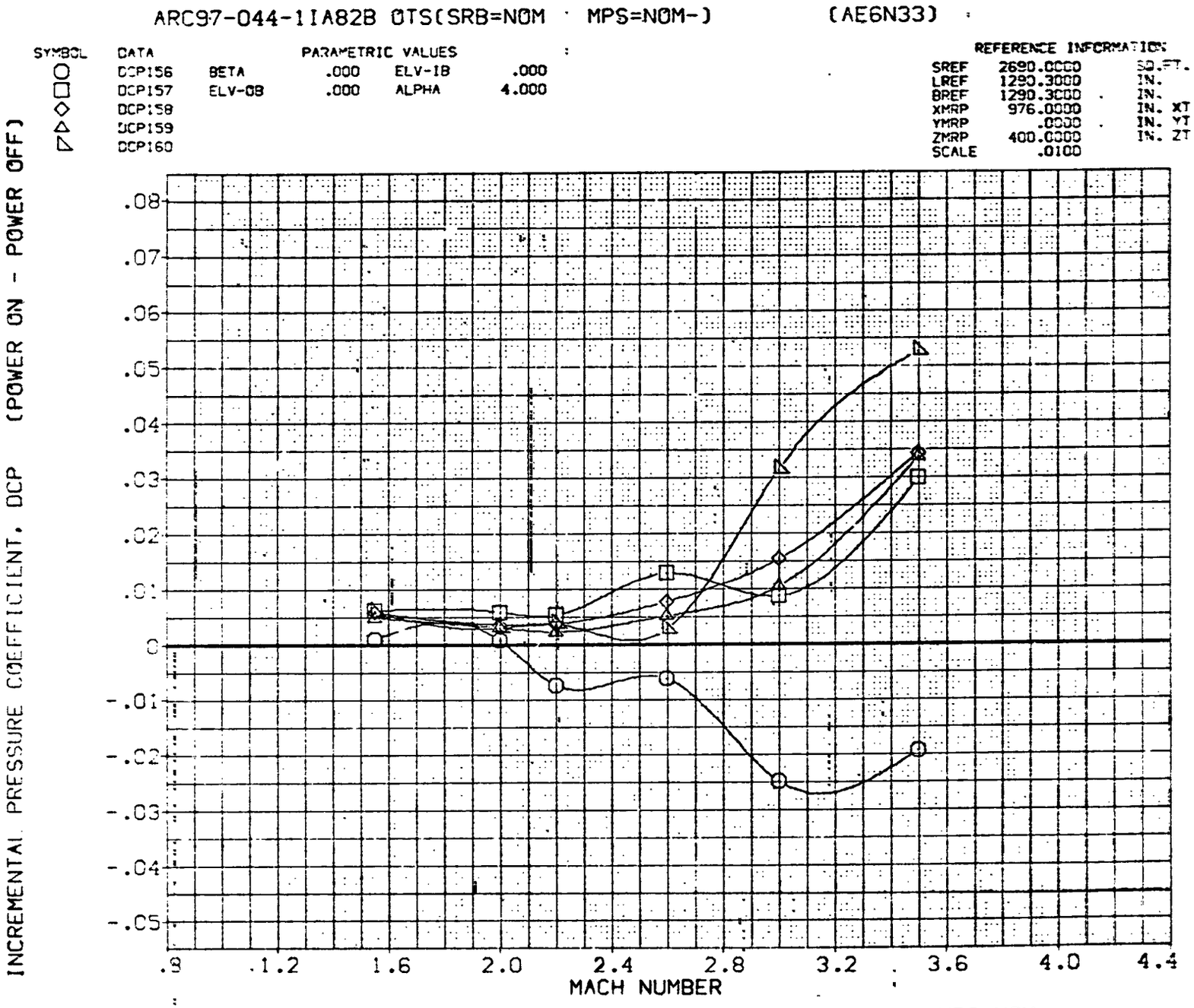


FIG. 108 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM-

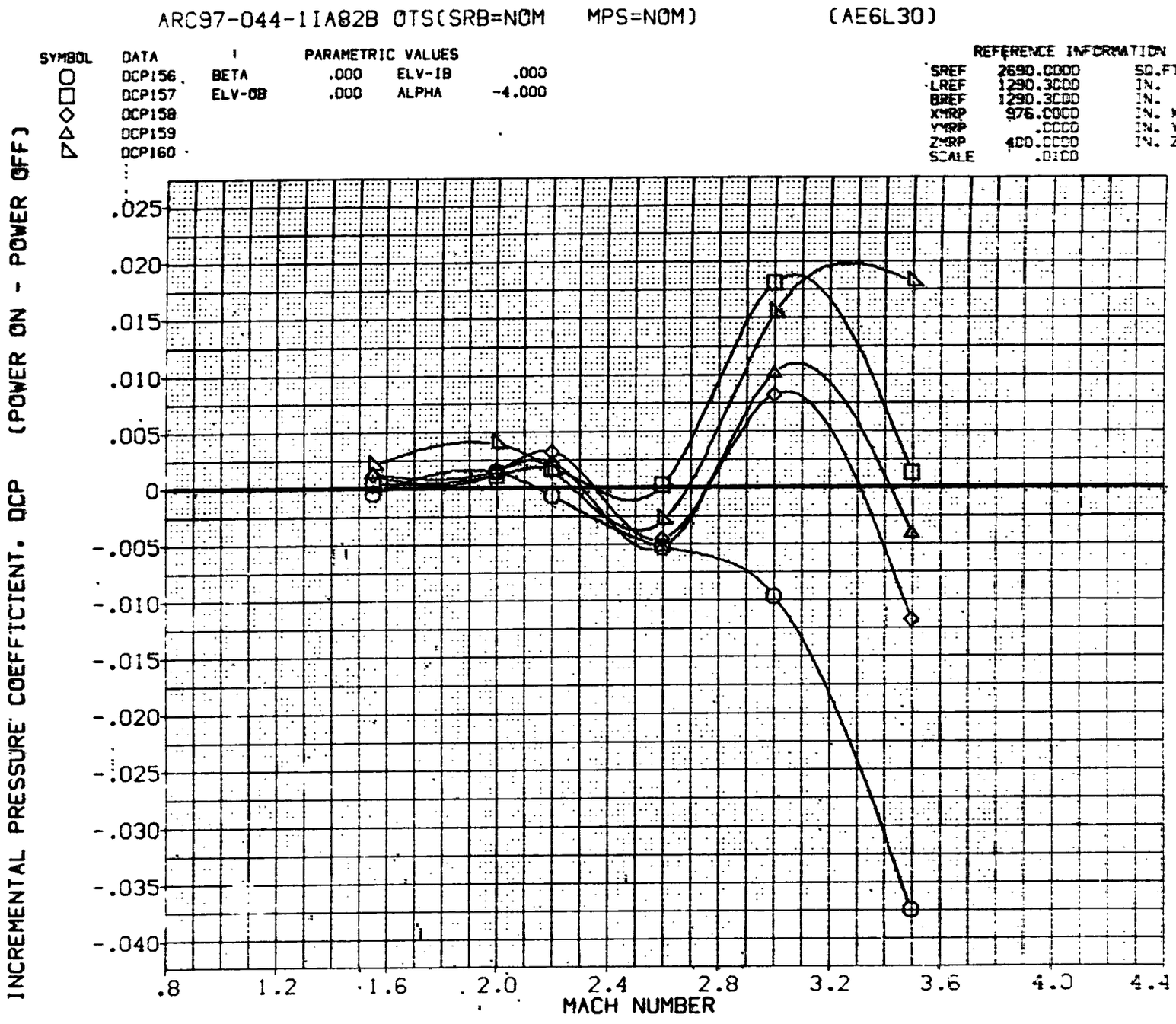


FIG. 109 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

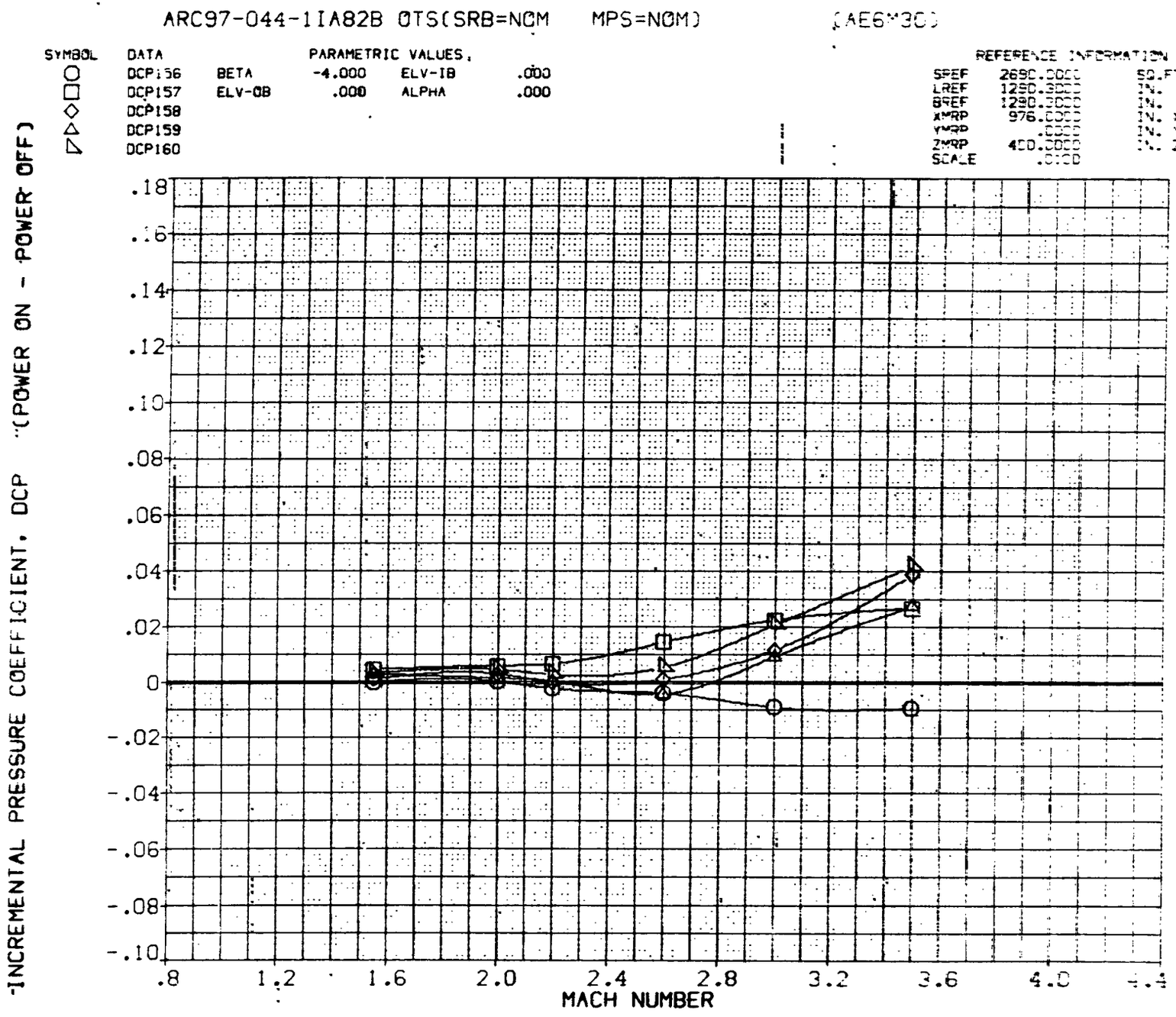


FIG. 109 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

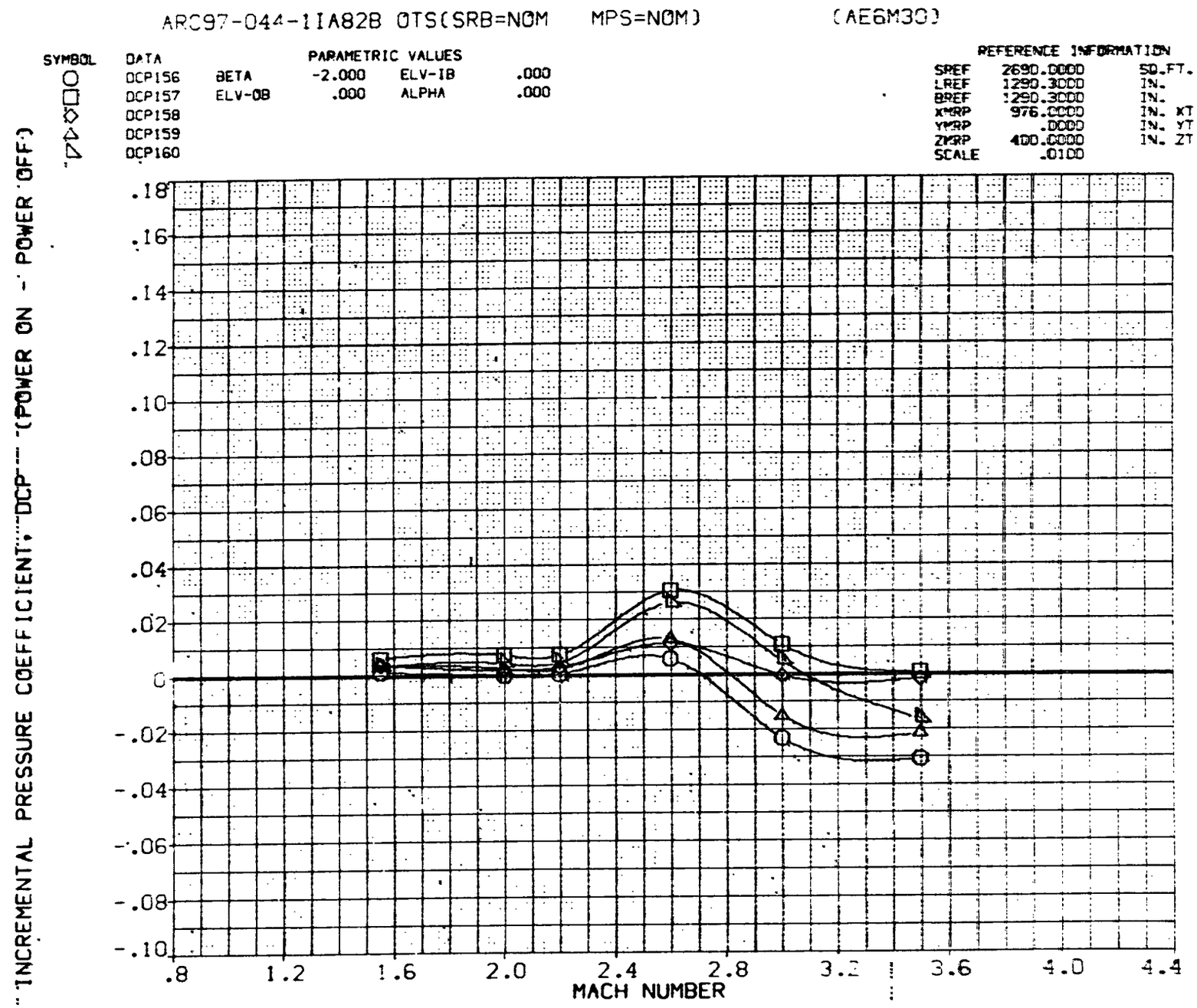


FIG. 109 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

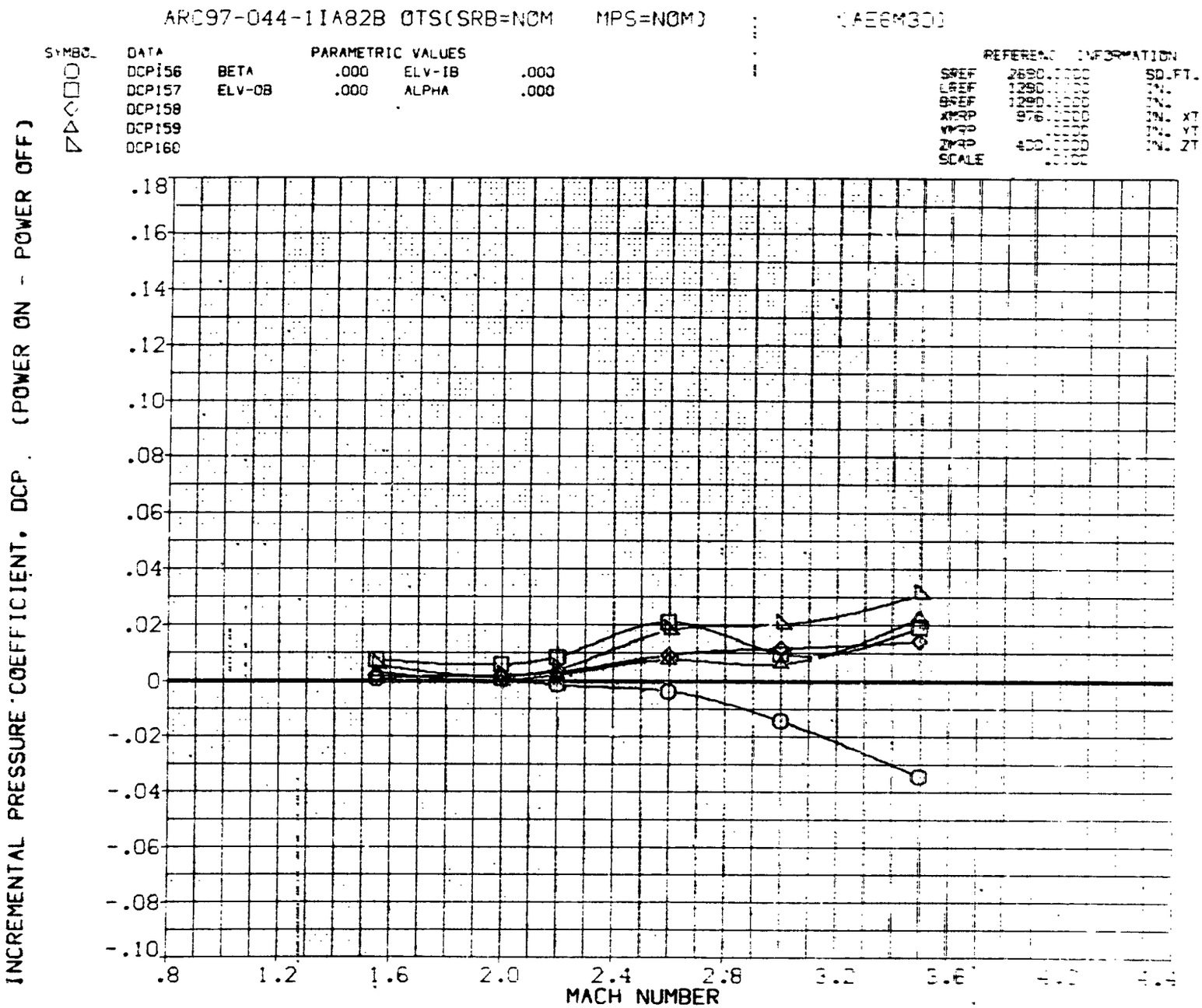


FIG. 109 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

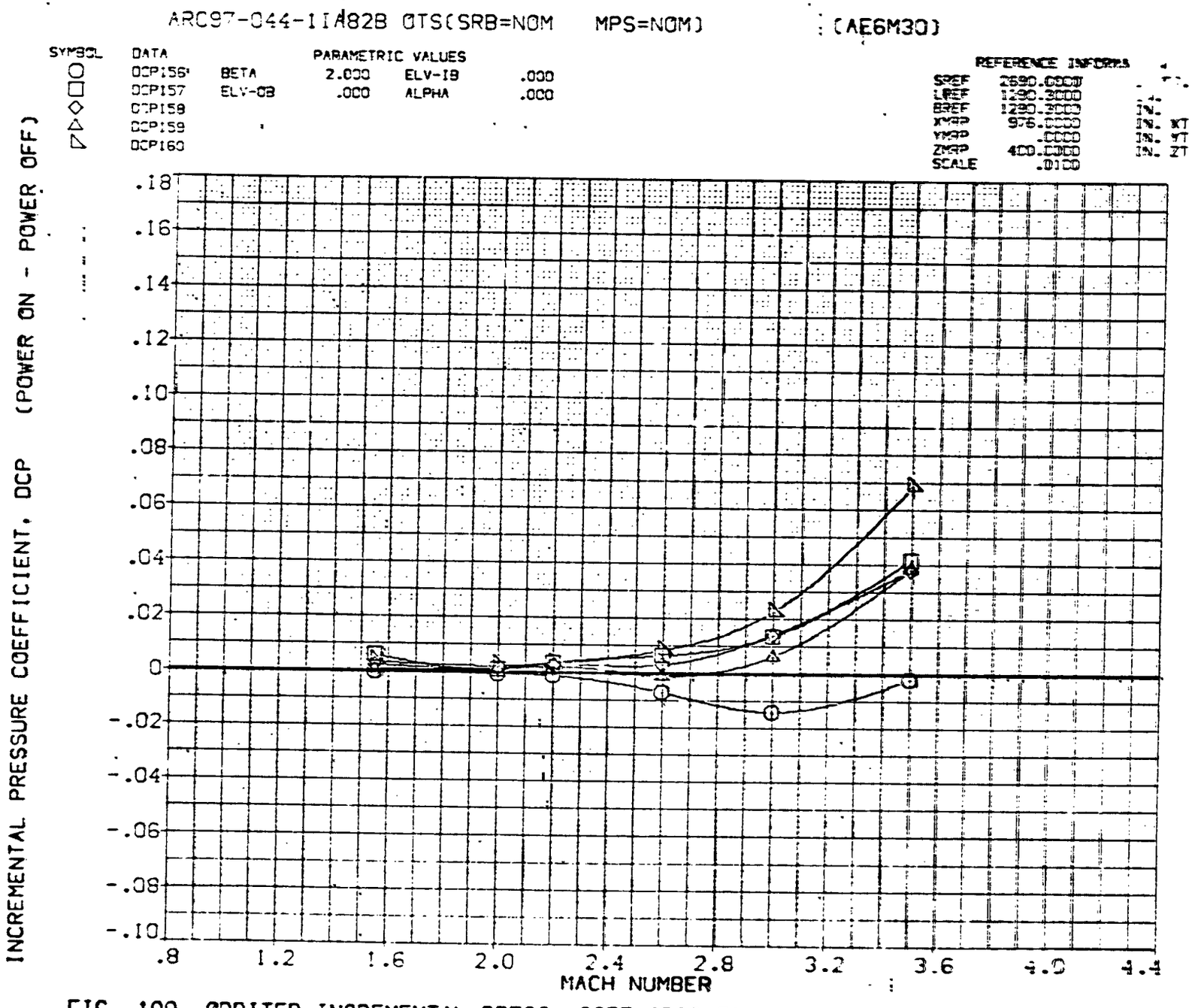


FIG. 109 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

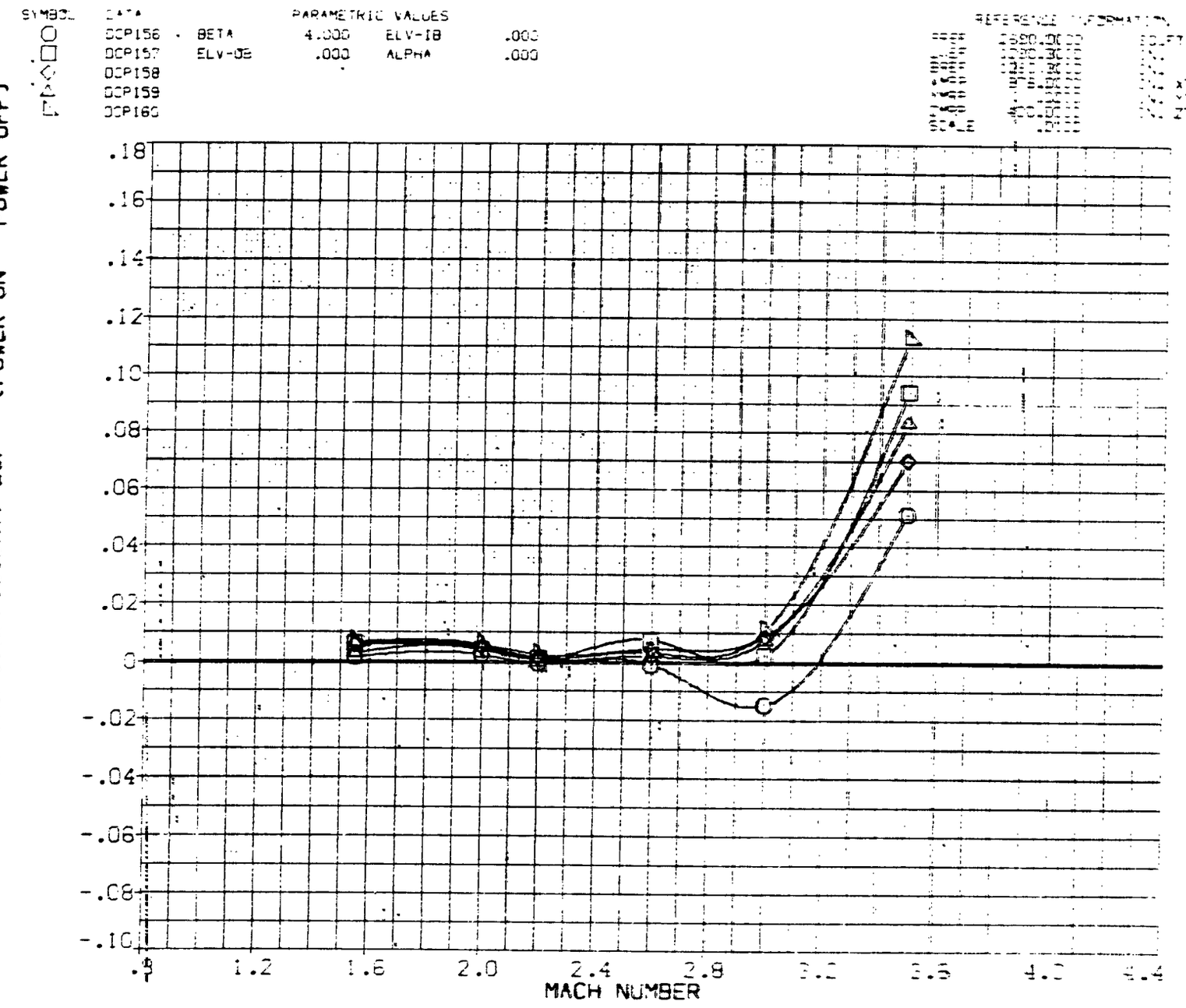


FIG. 109 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM

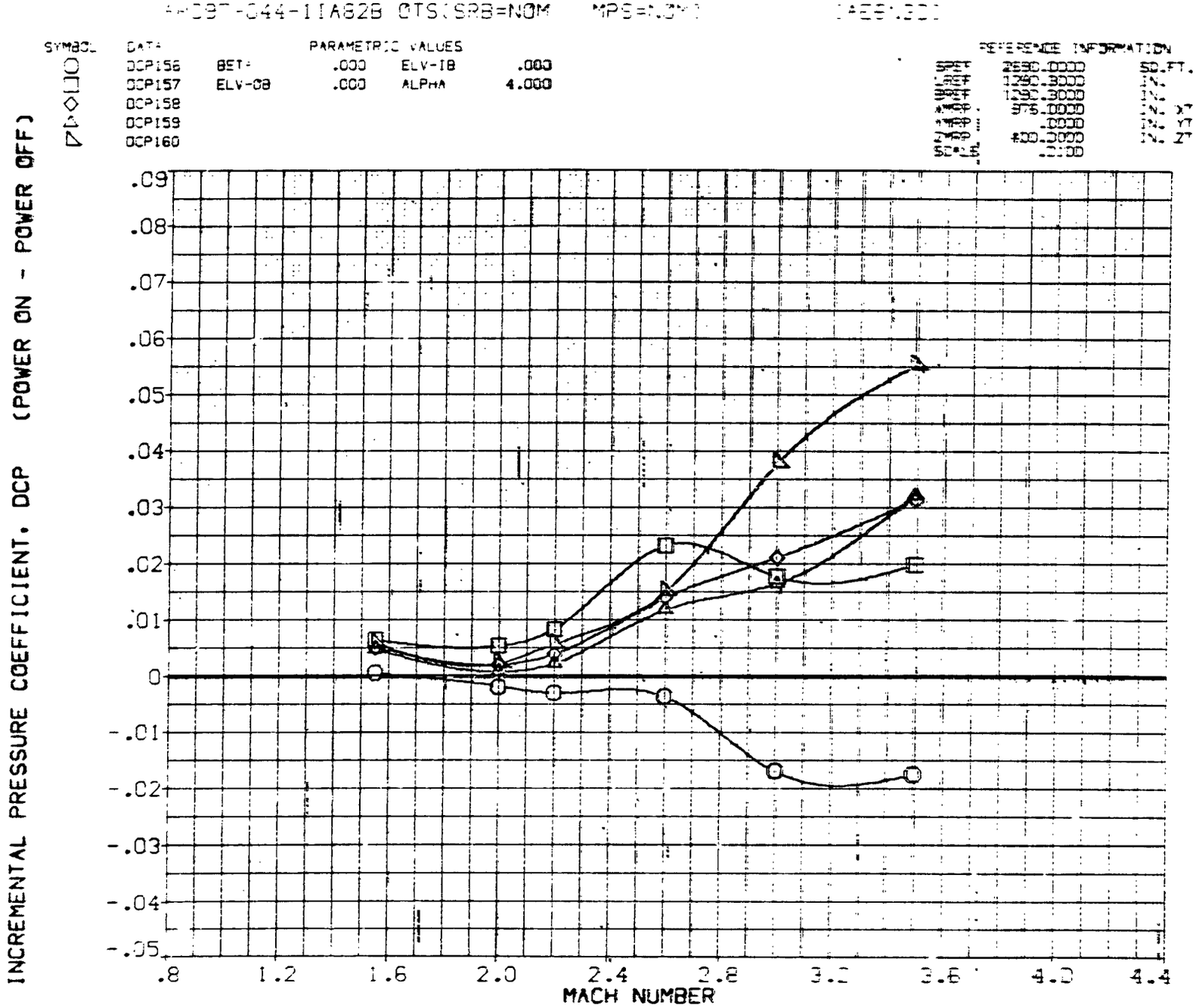


FIG. 109 ORBITER INCREMENTAL PRESS. COEF.(RIGHT). SRB=NOM. MPS=NOM

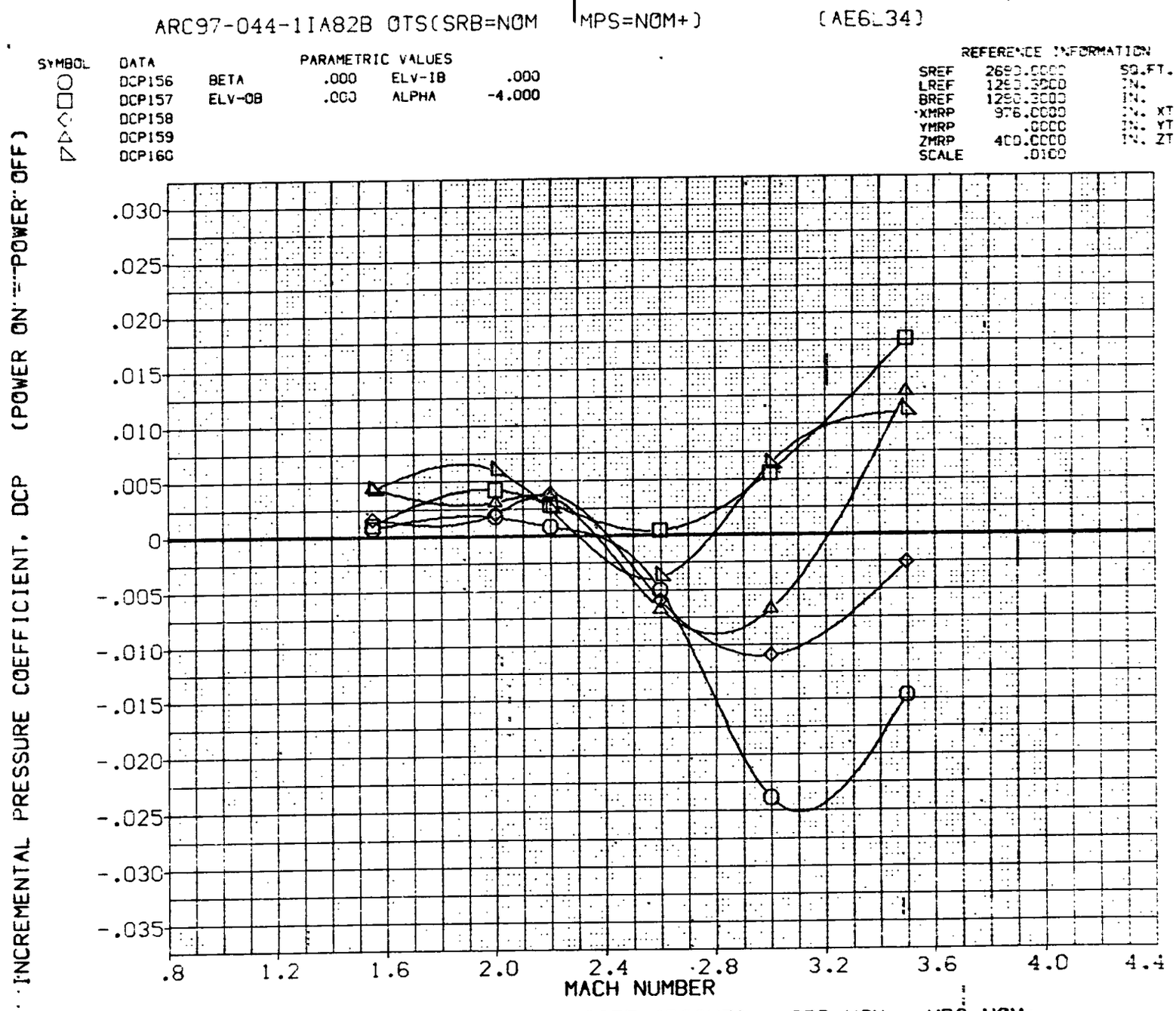


FIG. 110 ORBITER INCREMENTAL PRESS. COEF:(RIGHT), SRB=NOM, MPS=NOM+

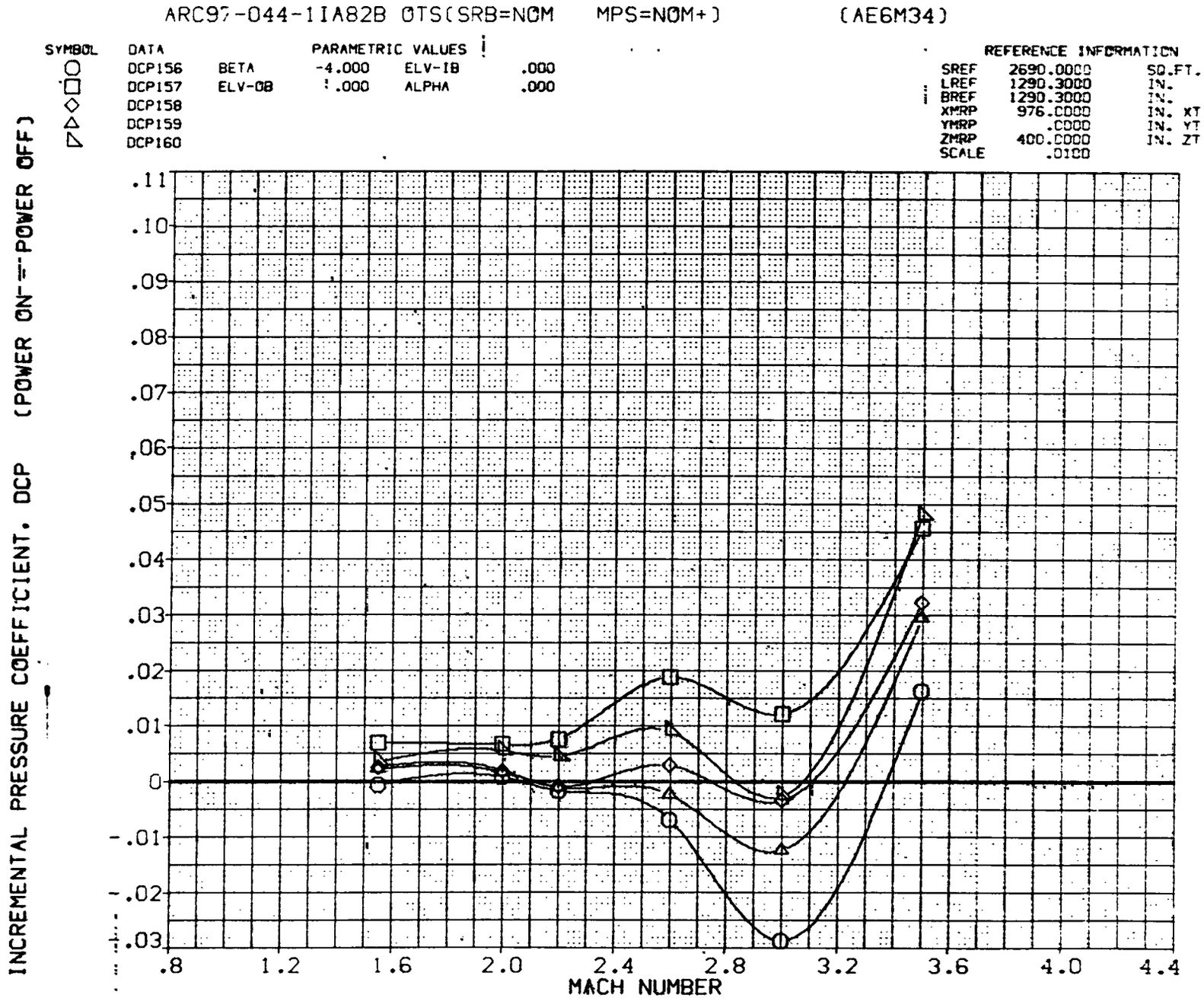


FIG. 110 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM+

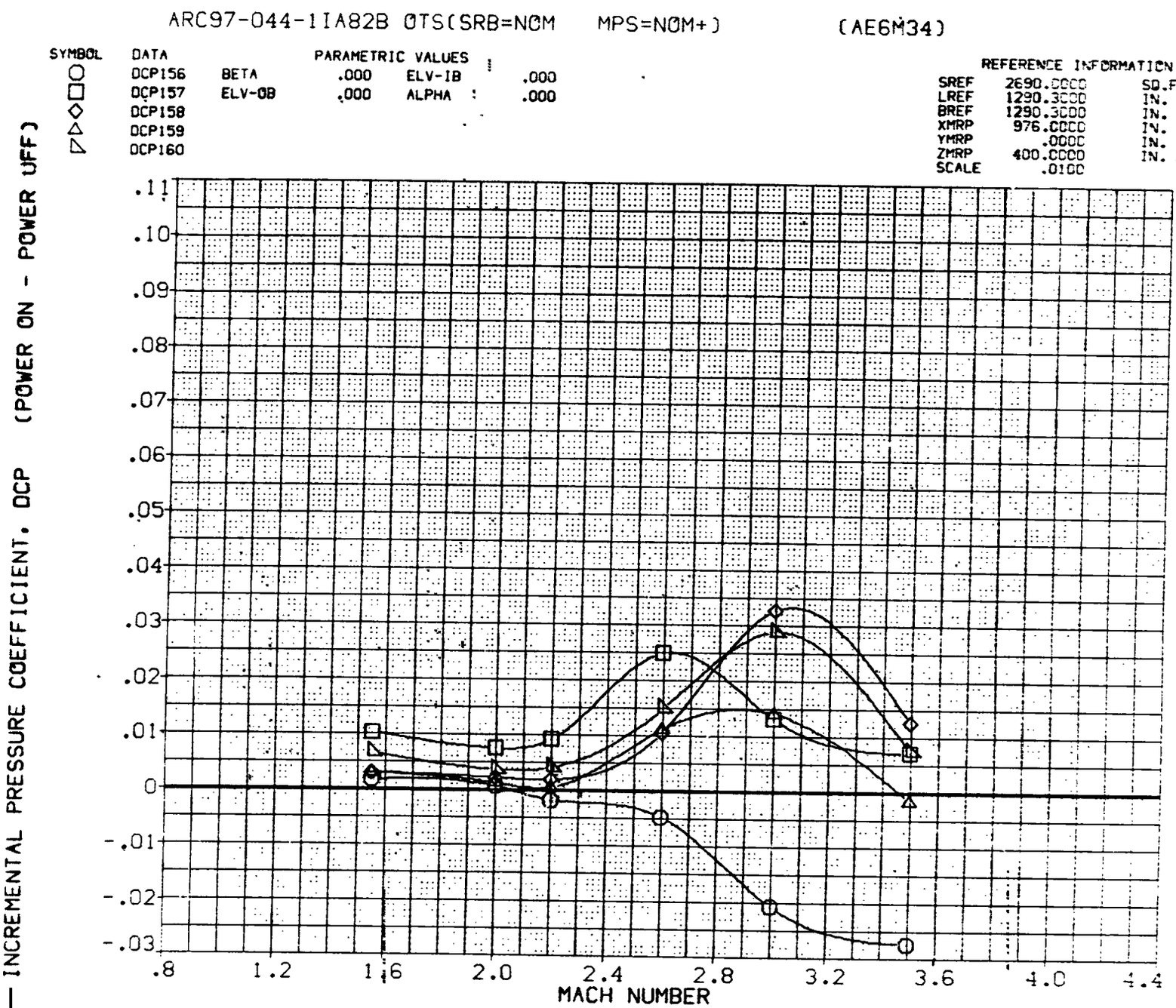


FIG. 110 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=N0M, MPS=N0M+

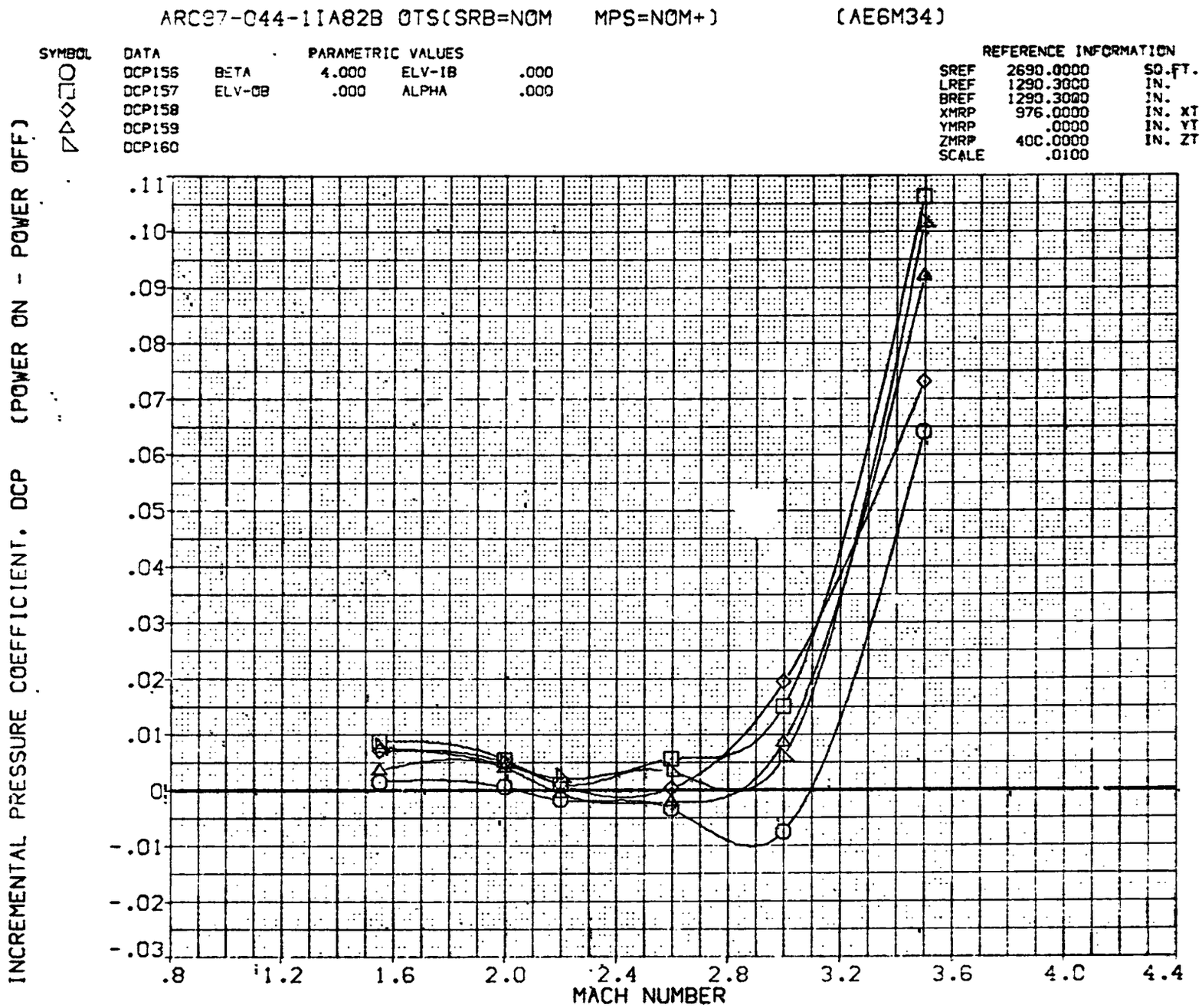


FIG. 110 0RBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=N0M, MPS=N0M+

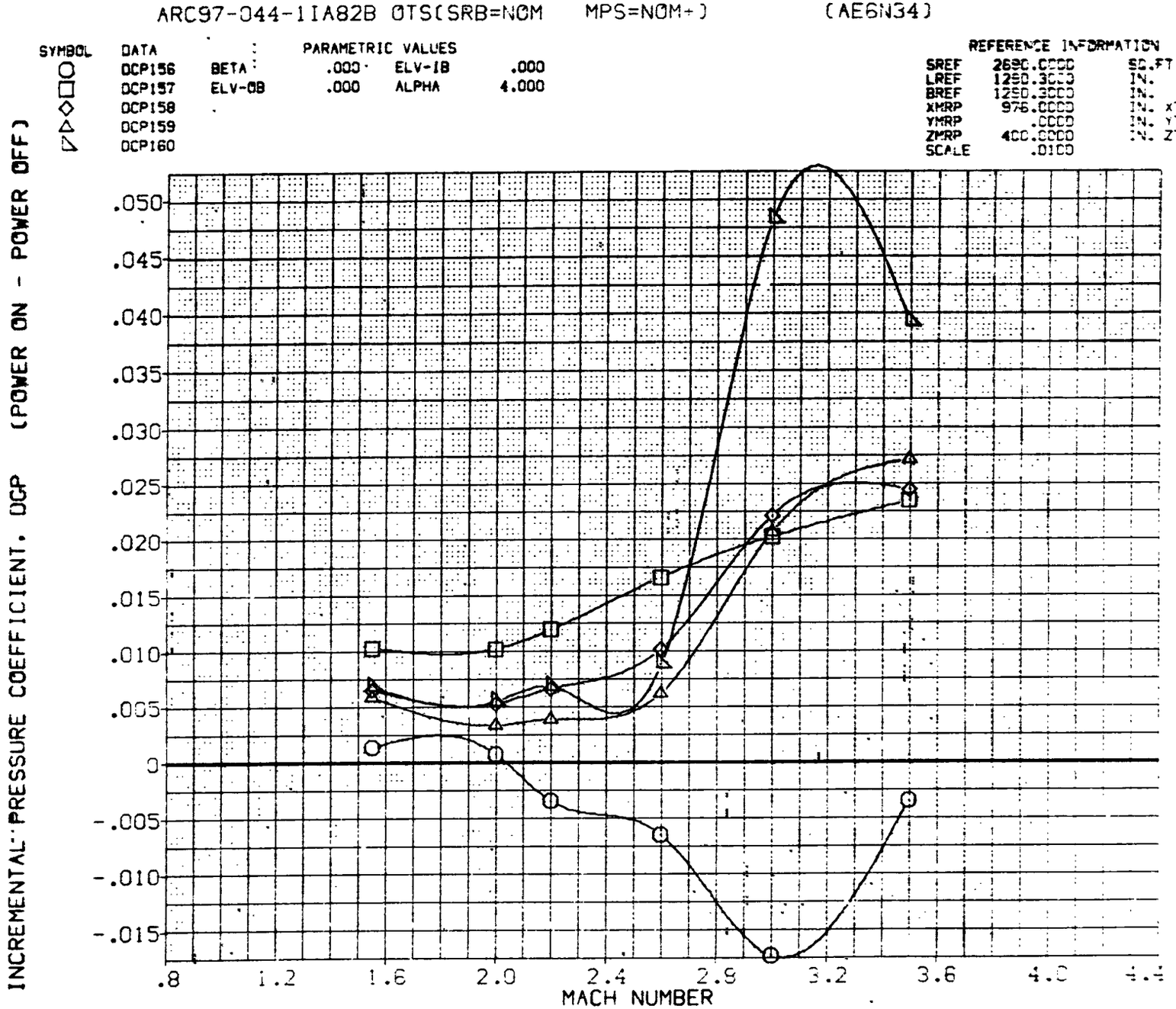


FIG. 110 ORBITER INCREMENTAL PRESS. COEF.(RIGHT), SRB=NOM, MPS=NOM+

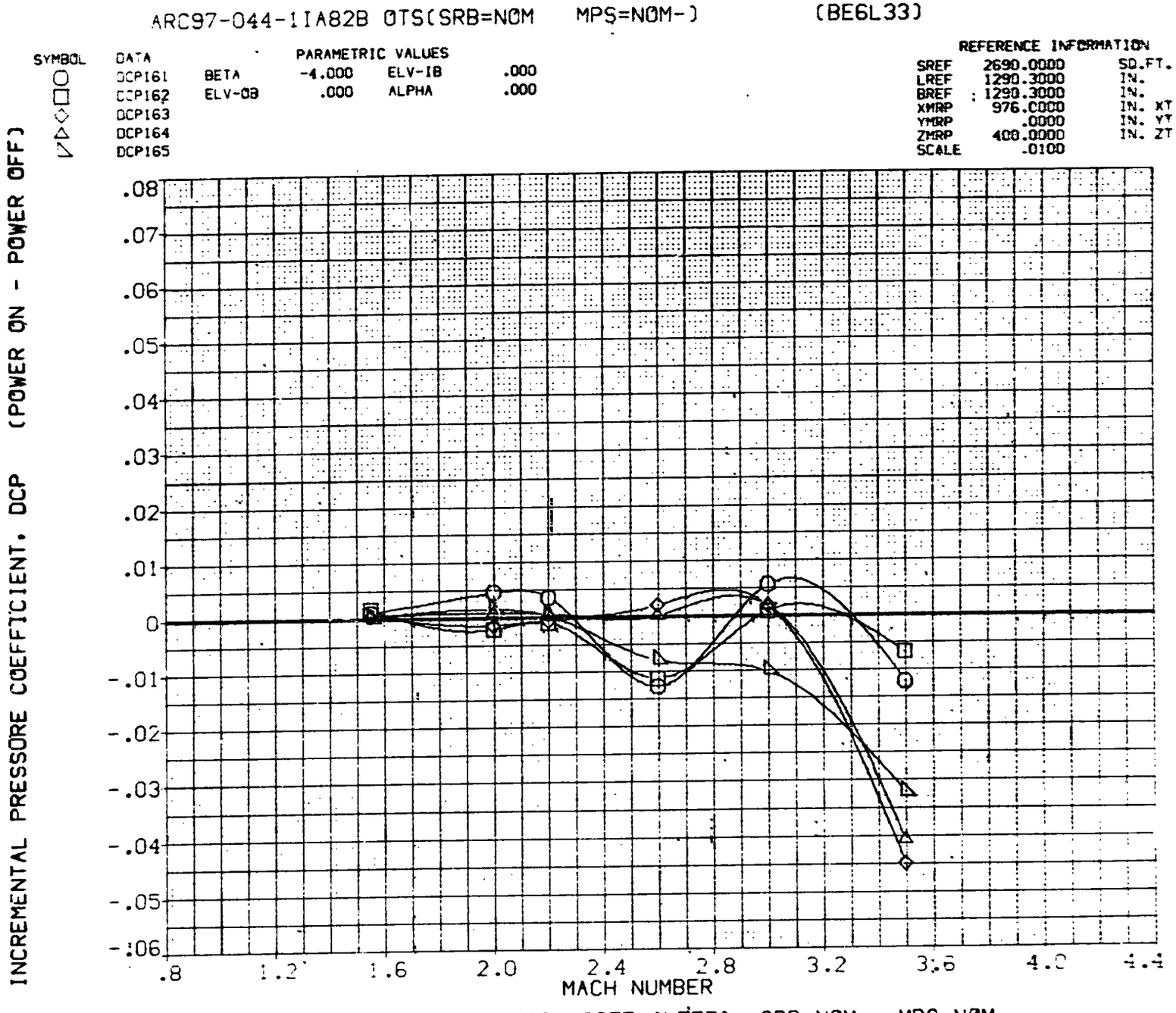


FIG. 111 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM-

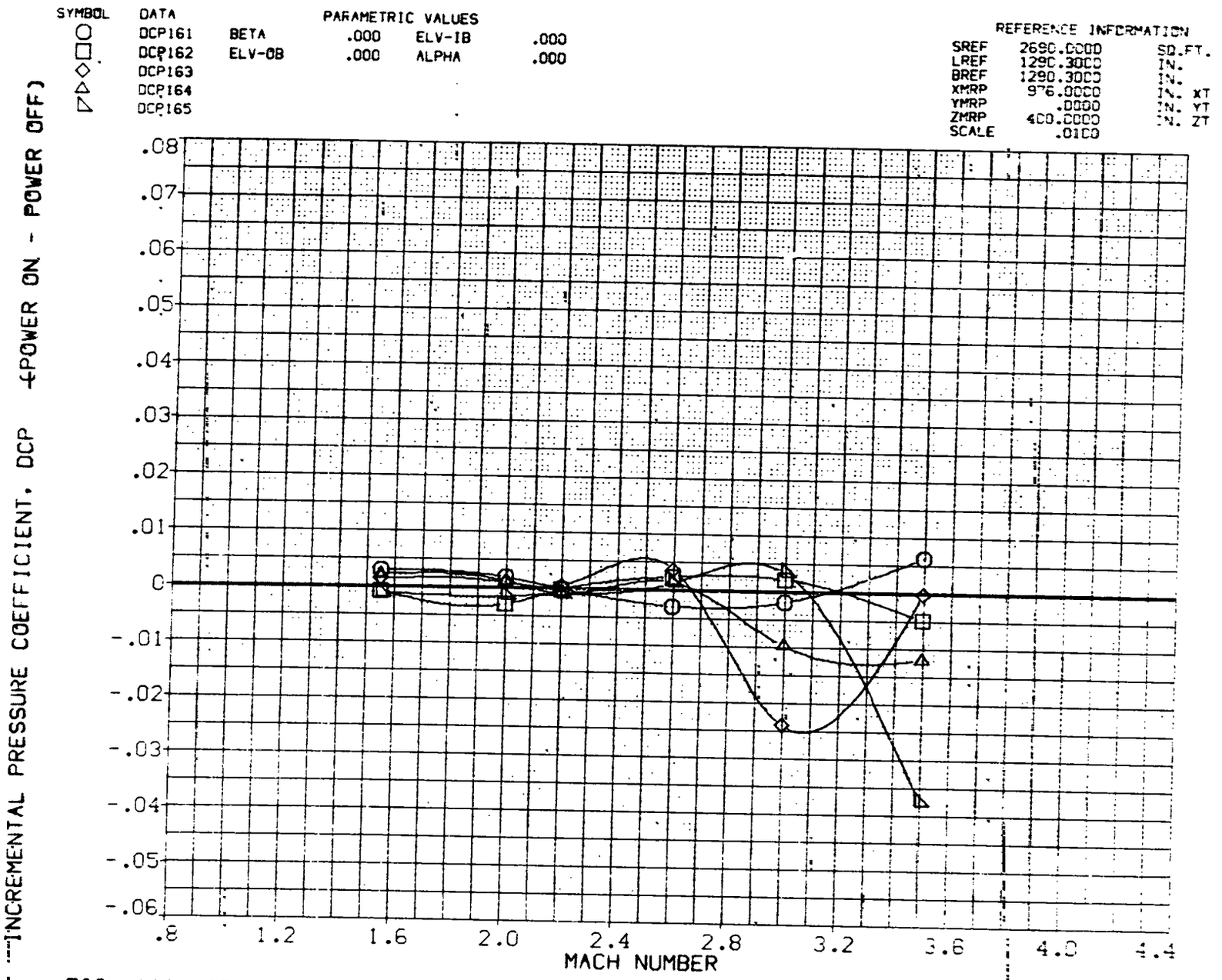


FIG. 111 ØRBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NØM, MPS=NØM-

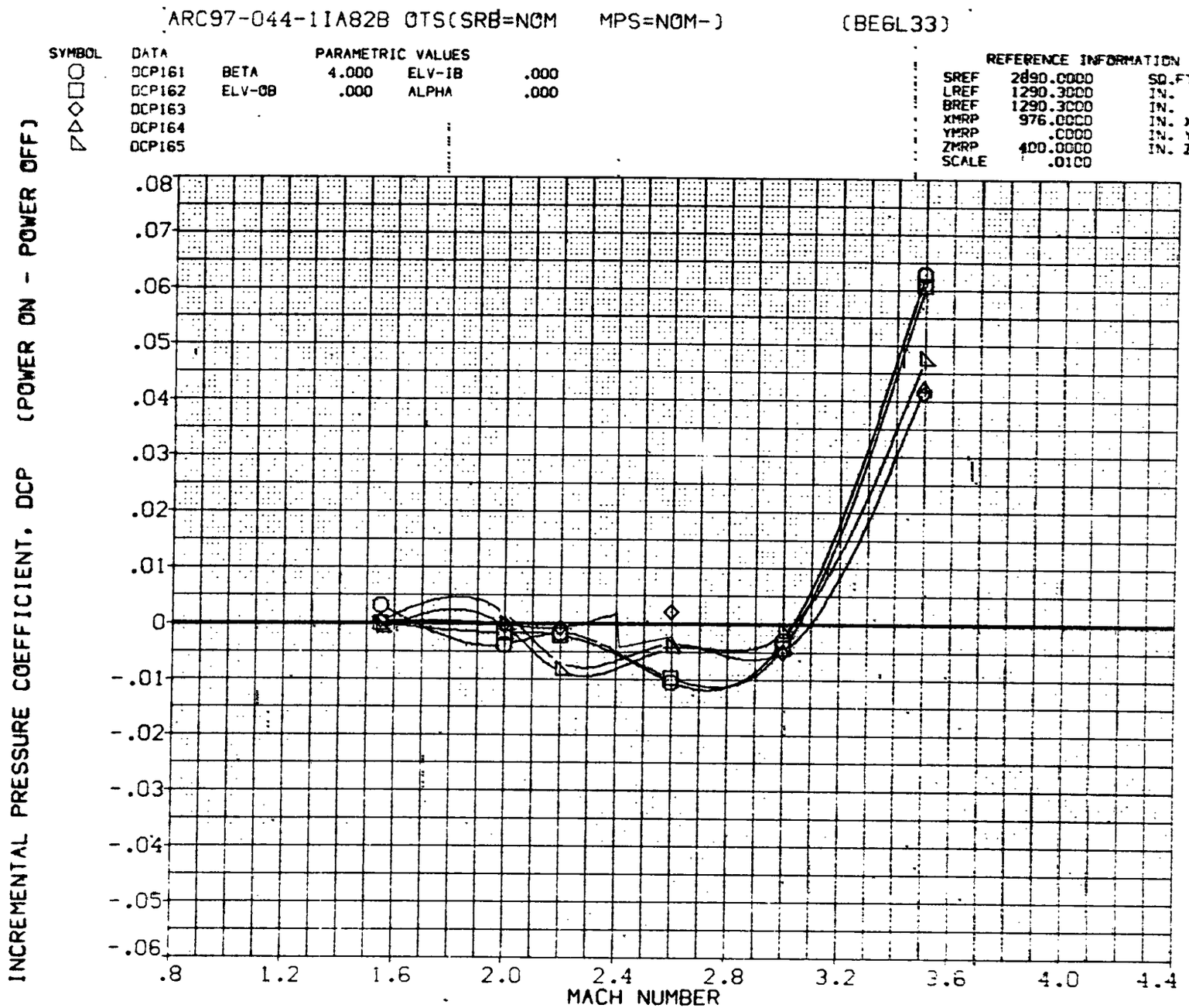


FIG. 111 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM-

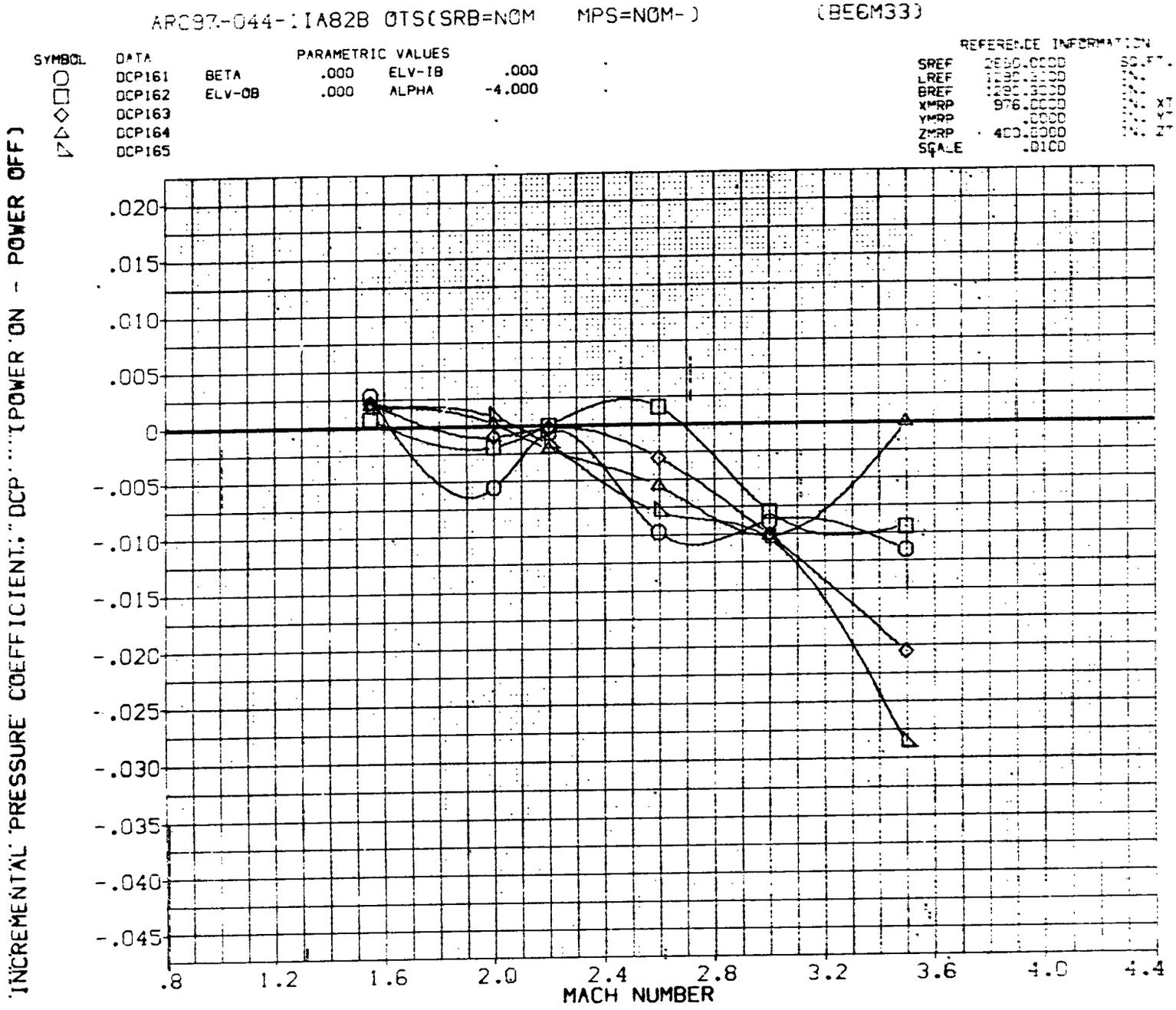


FIG. 111 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=N0M, MPS=N0M-

ARC97-044-1IA82B 0TS(SRB=N0M MPS=N0M-) (BE6N33)

SYMBOL	DATA		PARAMETRIC VALUES		
□	DCP161	BETA	.000	ELV-IB	.000
◇	DCP162	ELV-OB	.000	ALPHA	4.000
△	DCP163				
	DCP164				
	DCP165				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

INCREMENTAL PRESSURE COEFFICIENT, DCP (POWER ON - POWER OFF)

.025
.020
.015
.010
.005
0
-.005
-.010
-.015
-.020
-.025
-.030
-.035
-.040
-.045

.8 1.2 1.6 2.0 2.4 2.8 3.2 3.6 4.0 4.4

MACH NUMBER

FIG. 11.1 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM-

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ARC87-044-11A82B 0TS(SRB=NOM MPS=NOM) (SE6L3D)

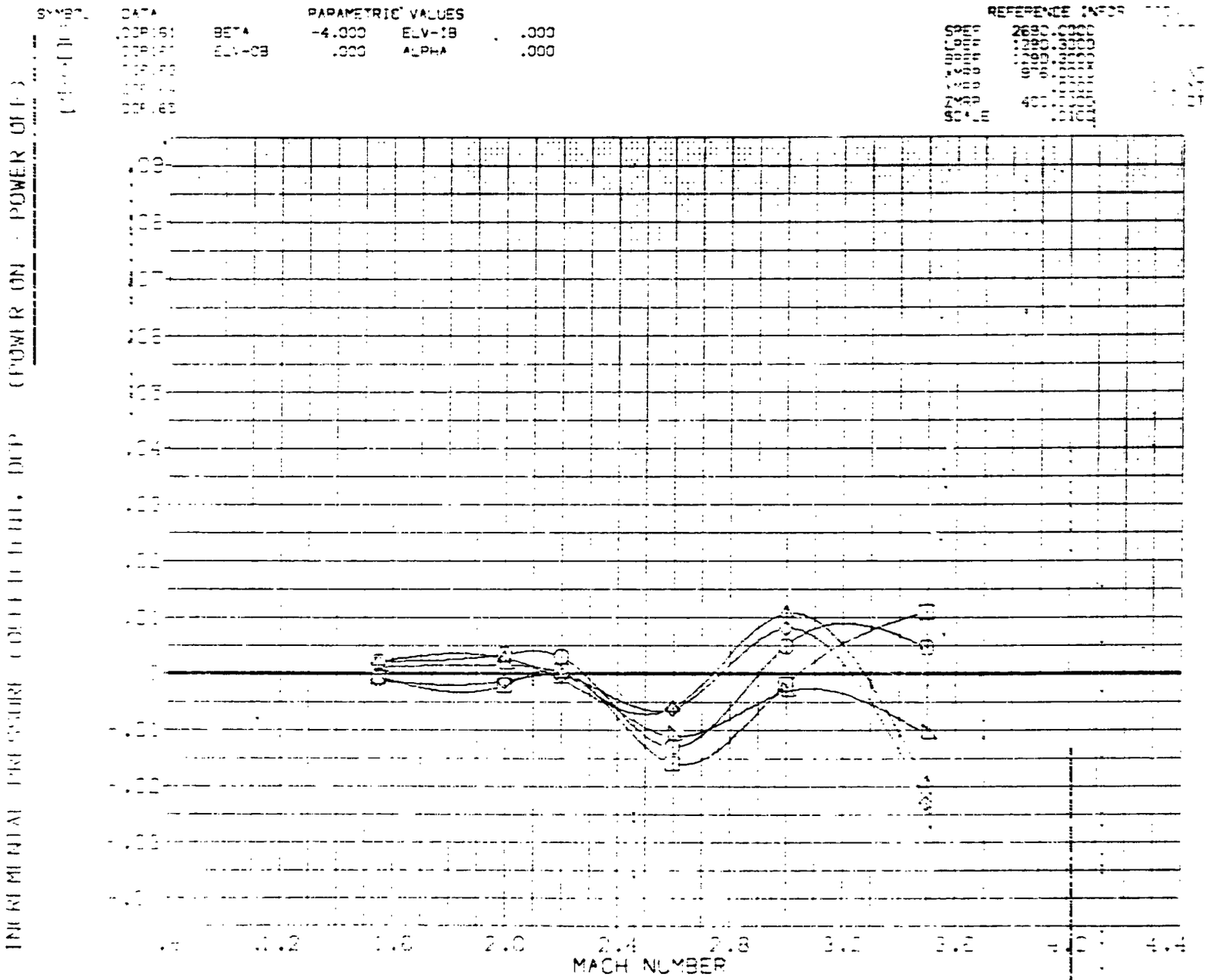


FIG. 112 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM

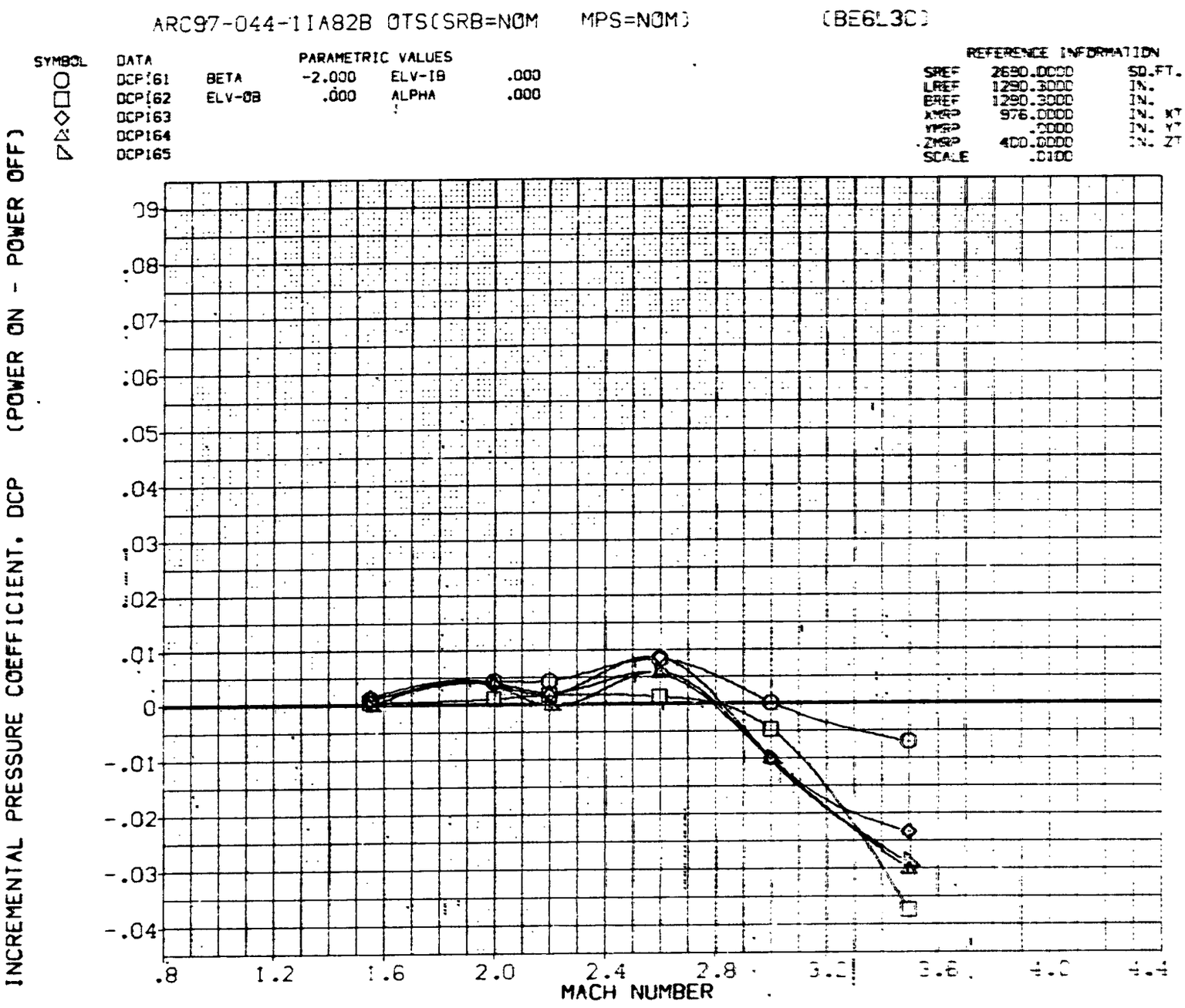


FIG. 112 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM

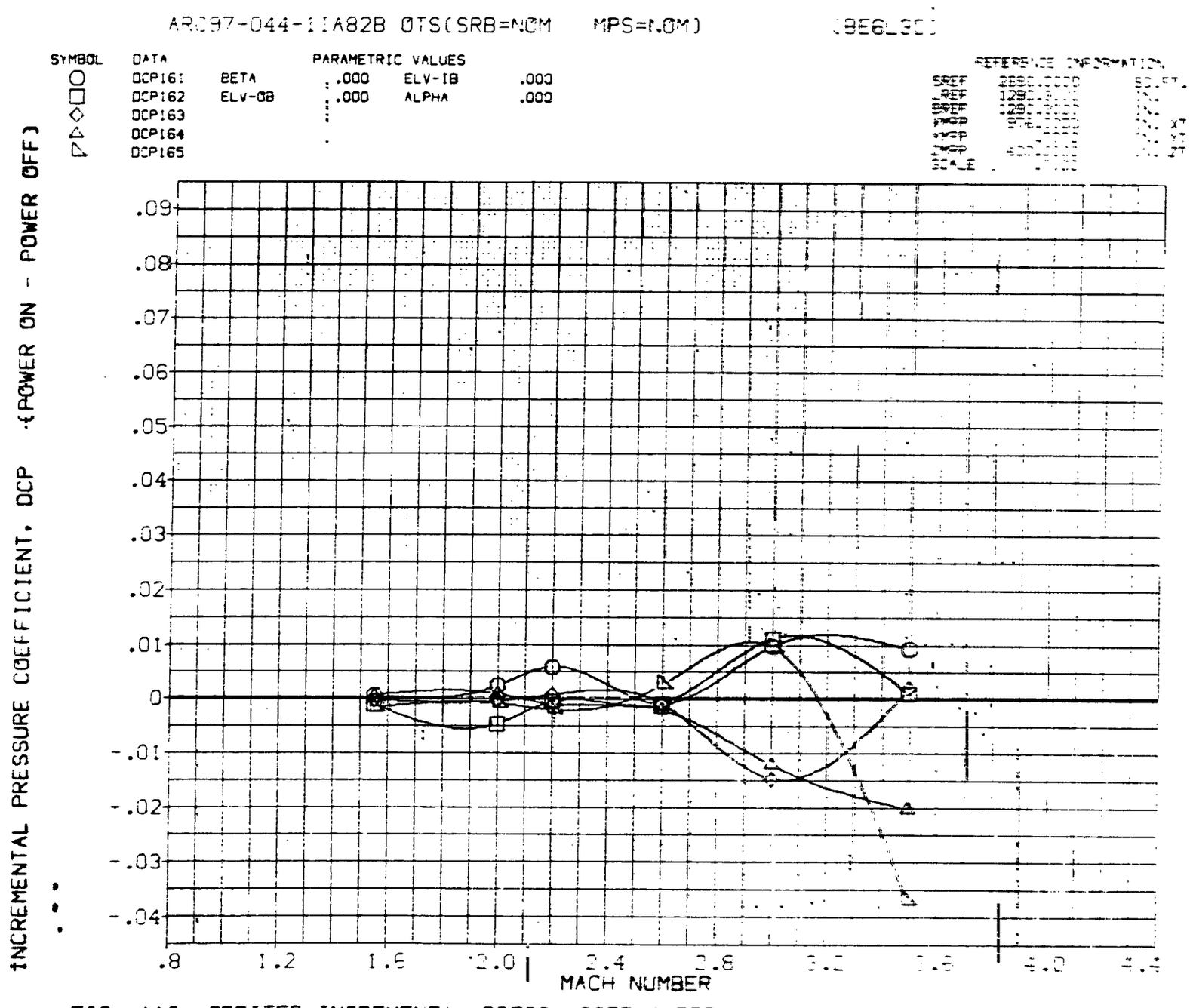


FIG. 112 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM

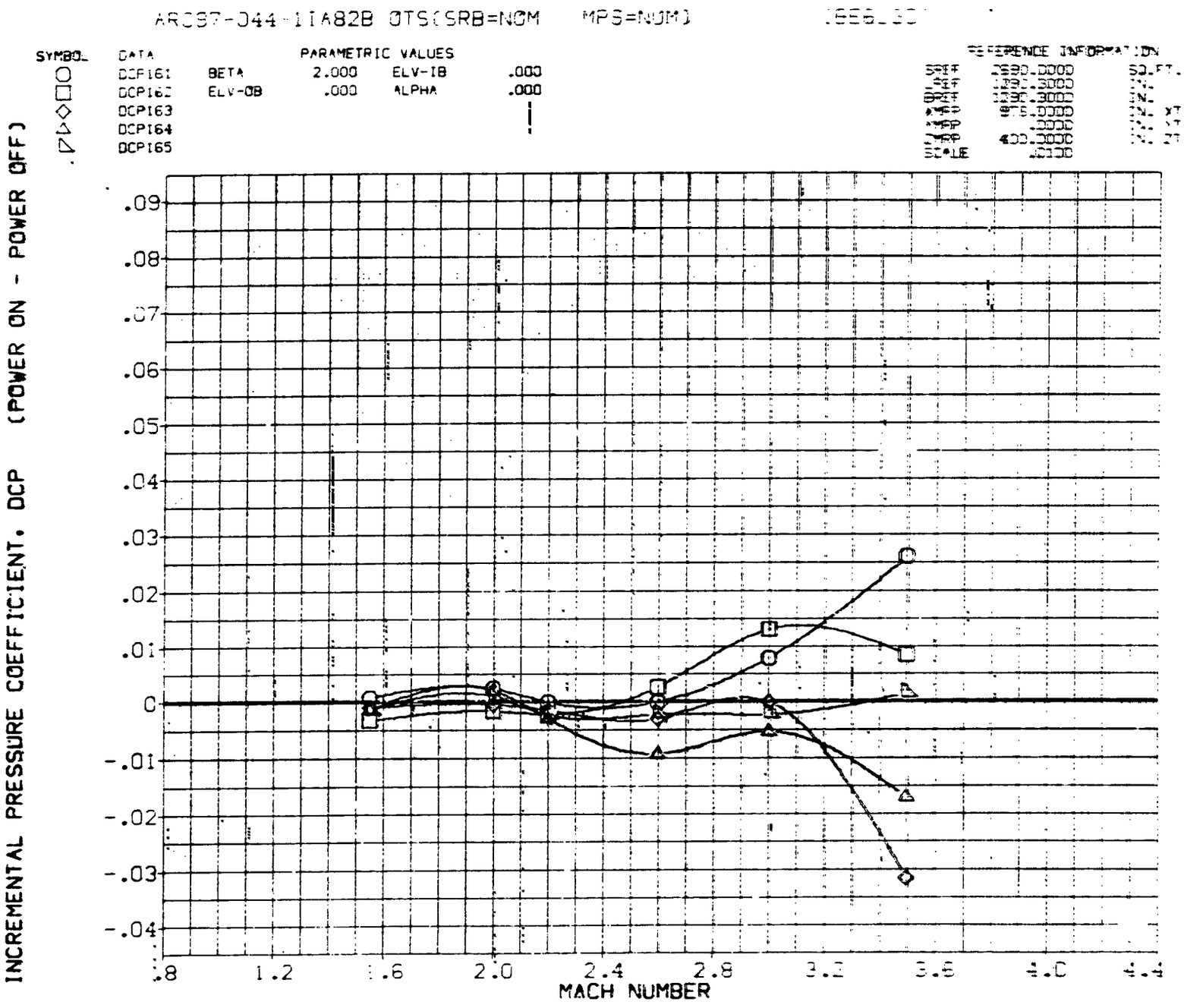


FIG. 112 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM

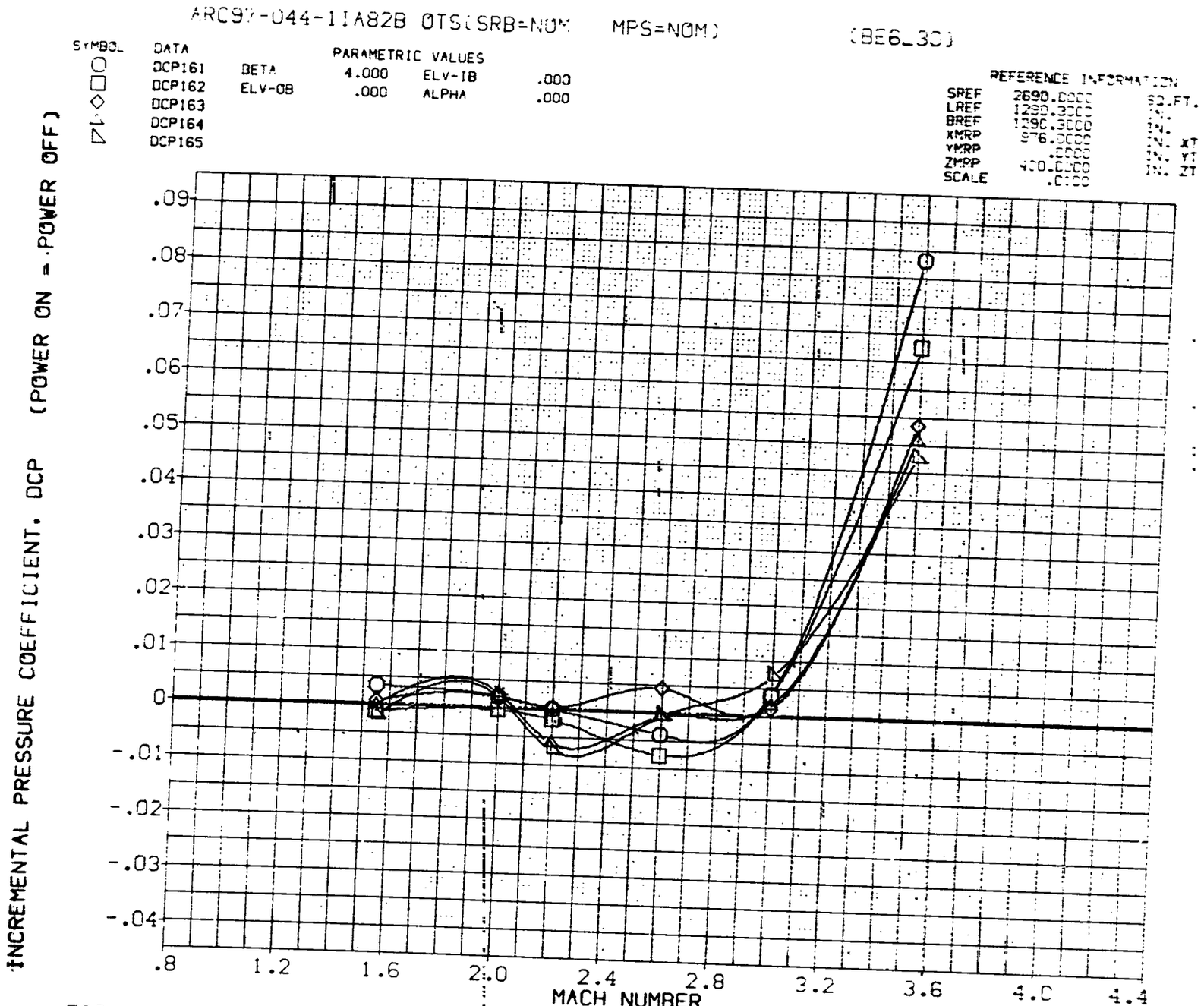


FIG. 112 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM

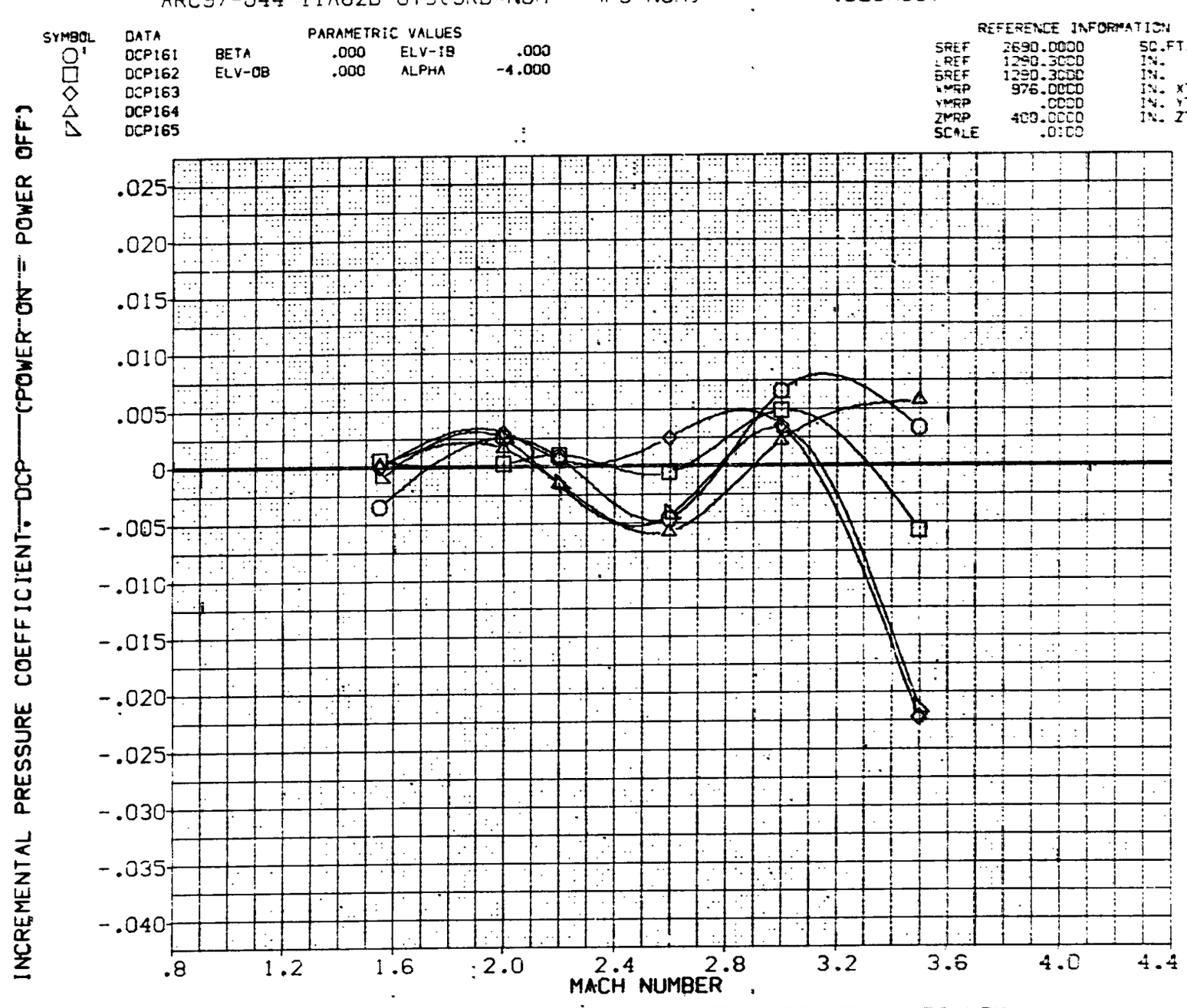


FIG. 112 ORBITER INCREMENTAL PRESS. COEF. (LEFT) SRB=NOM, MPS=NOM

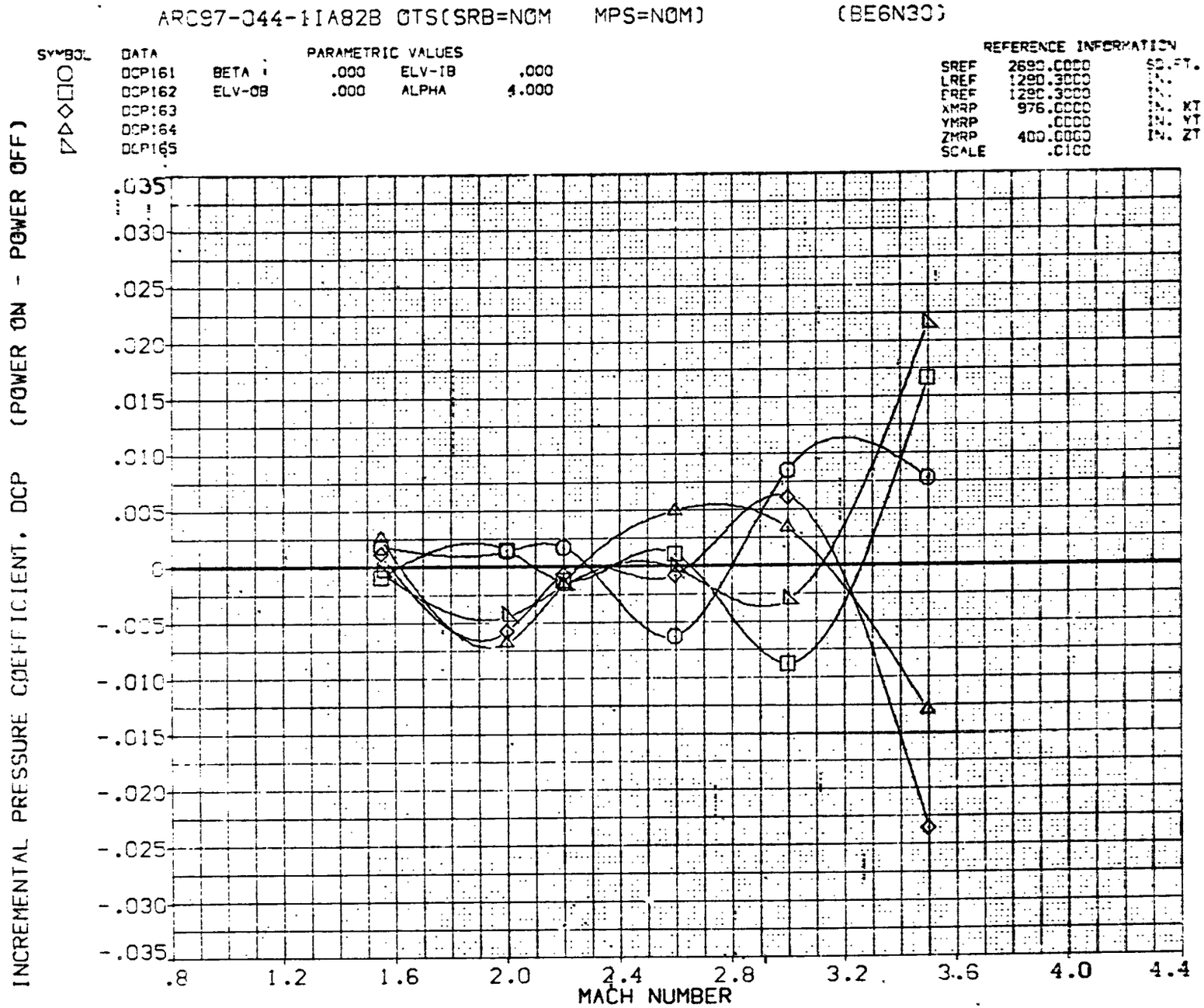


FIG. 112 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM

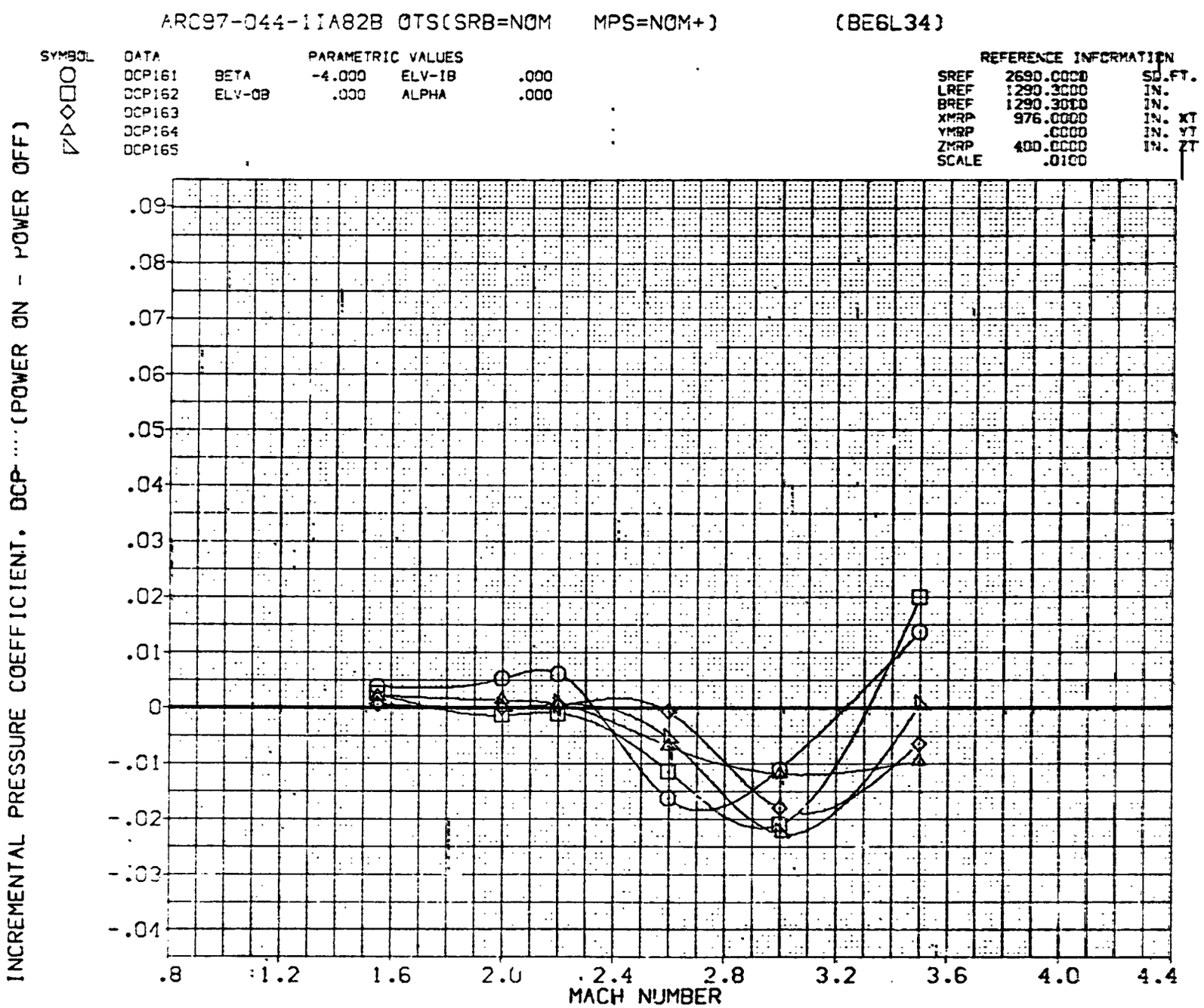


FIG. 113 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=N0M, MPS=N0M+

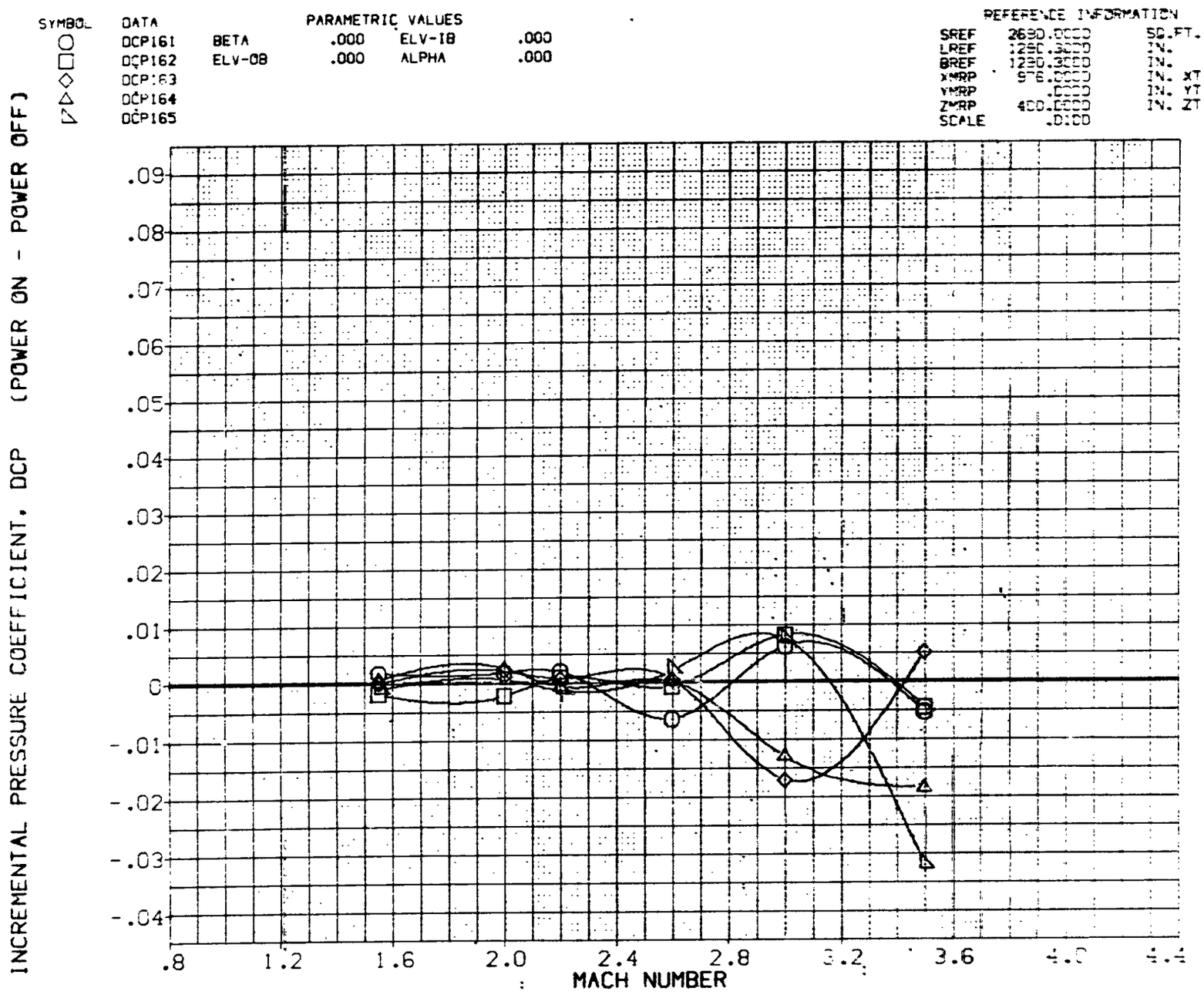


FIG. 113 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM+

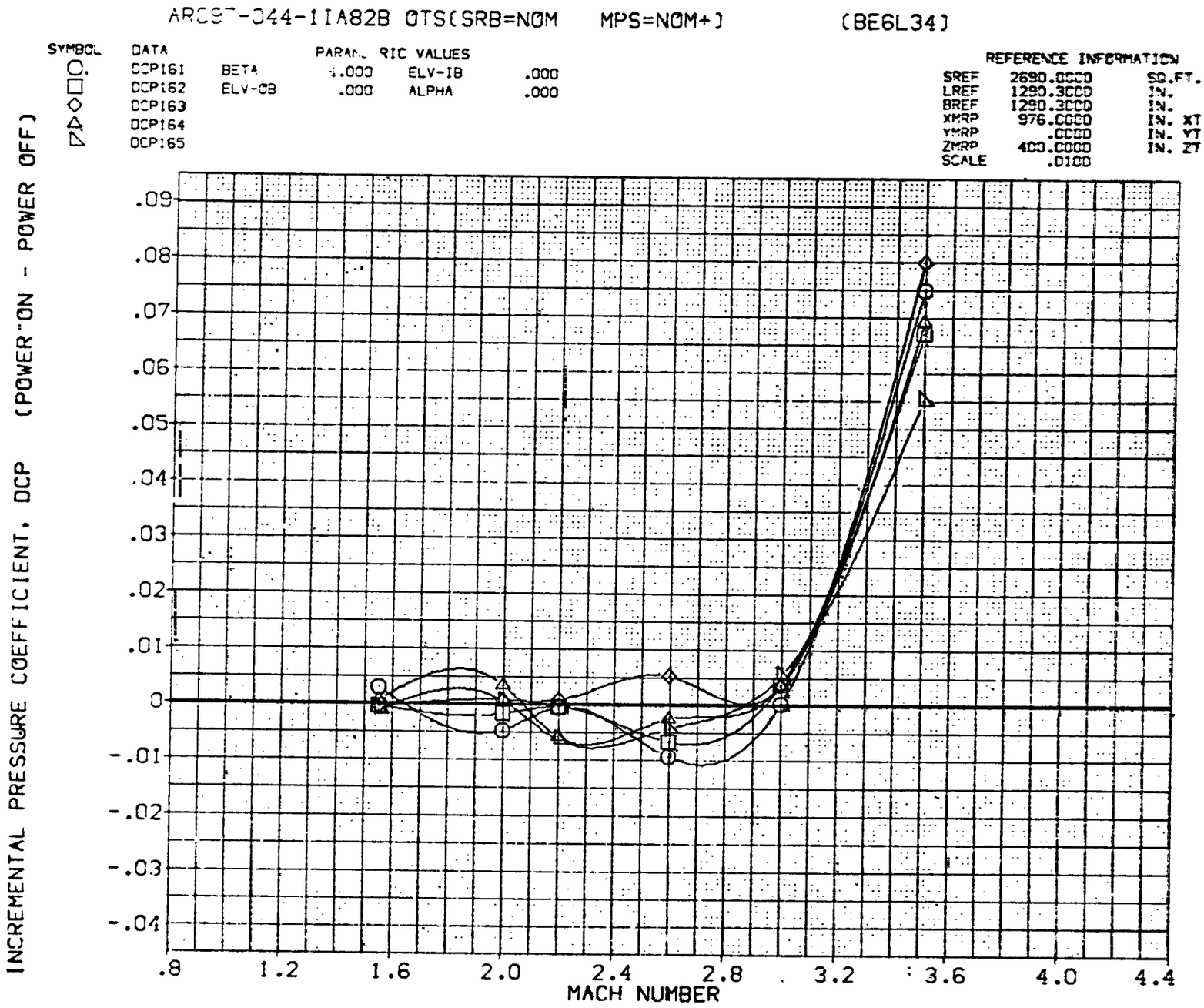


FIG. 113 ORBITER INCREMENTAL PRESS. COEF.(LEFT) (SRB=NOM, MPS=NOM+)

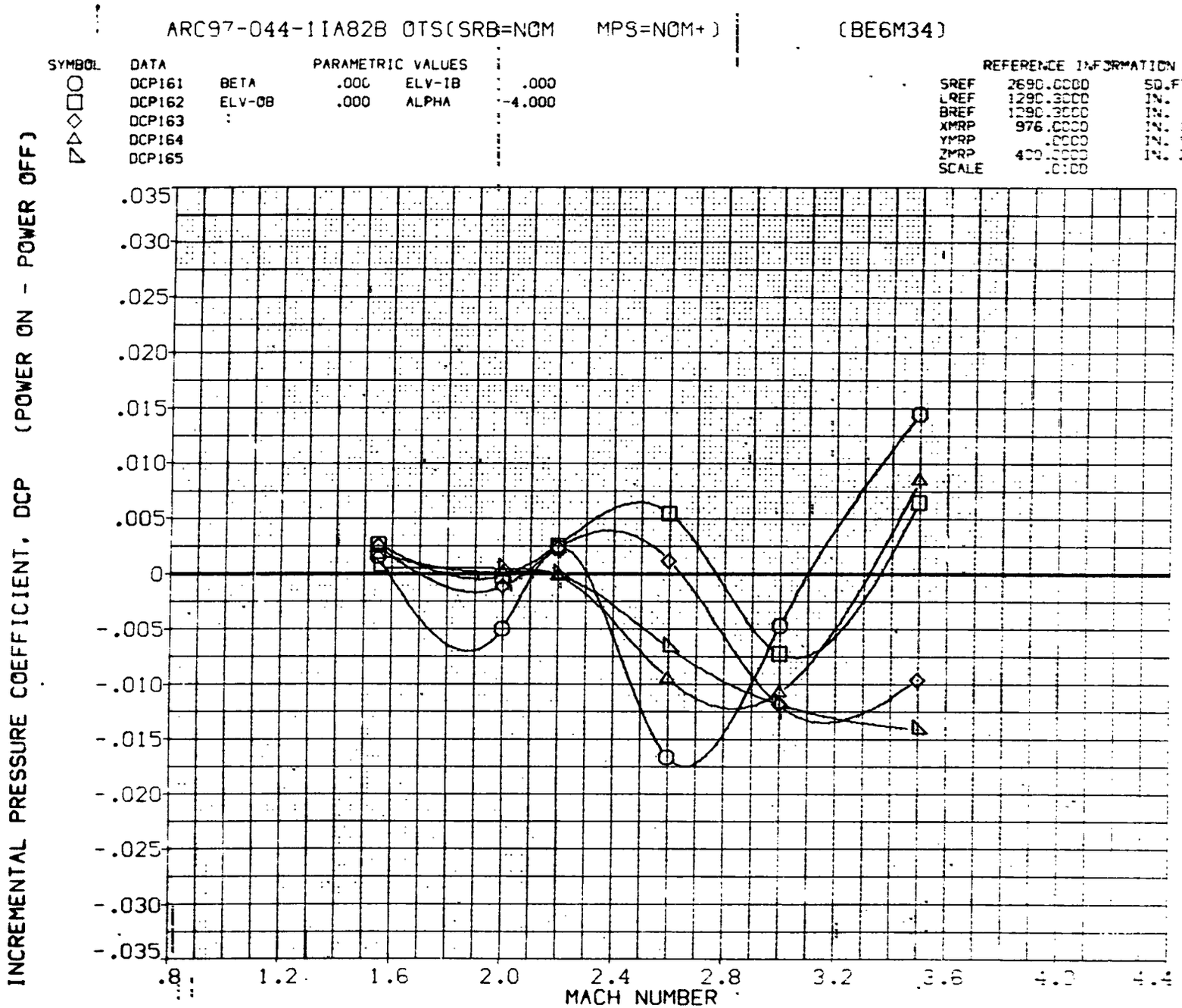


FIG. 113 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM+

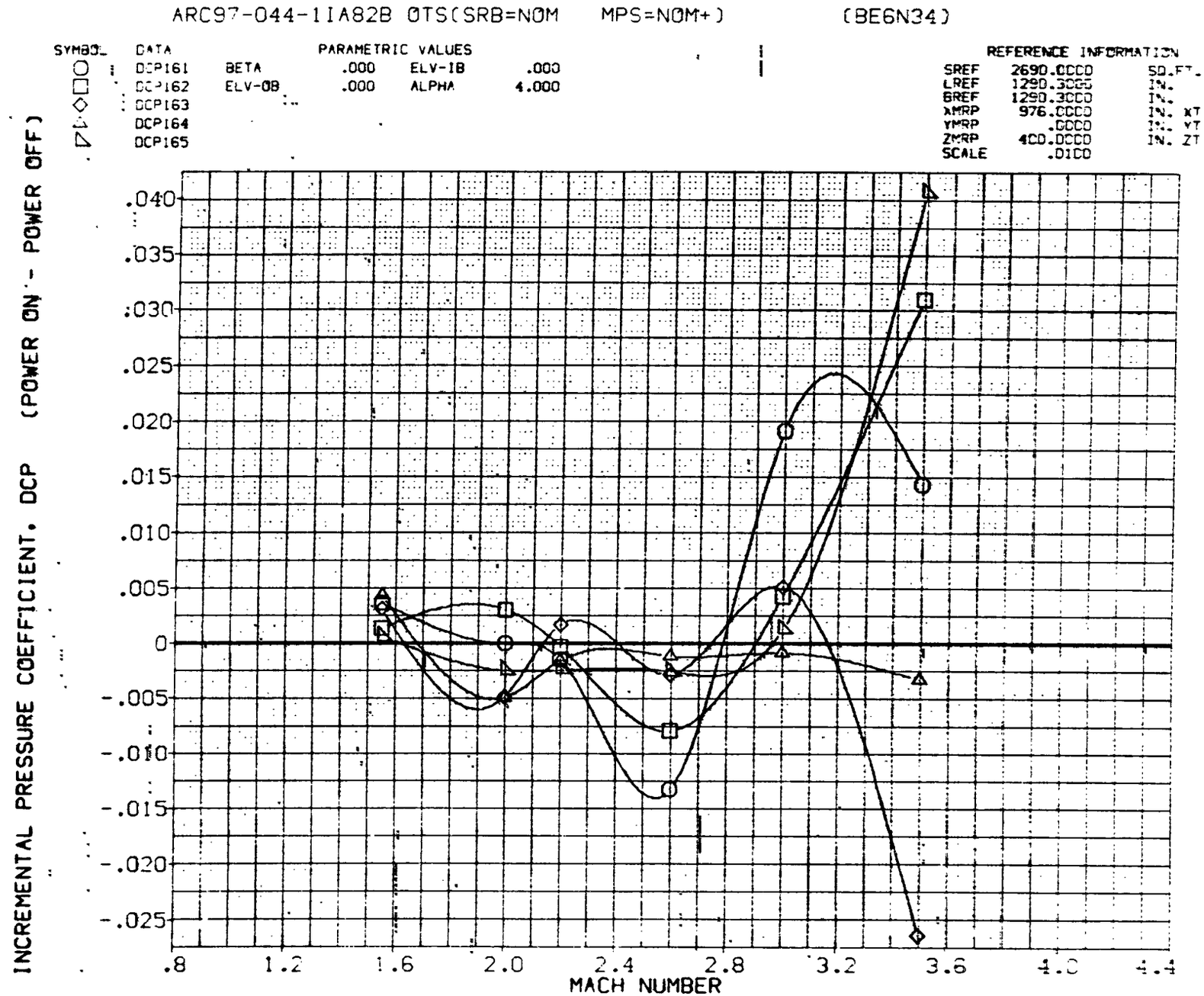


FIG. 113 ORBITER INCREMENTAL PRESS. COEF.(LEFT) SRB=NOM, MPS=NOM+

ARC97-044-1IA82B OTS(SRB=NOM MPS=NOM-) (BE8L33)

SYMBOL	DATA		PARAMETRIC VALUES		
○	DCP166	BETA	-4.000	ELV-IB	.000
□	DCP167	ELV-OB	.000	ALPHA	.000
◇	DCP168				
△	DCP169				
▽	DCP170				

REFERENCE INFORMATION

SREF	2680.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

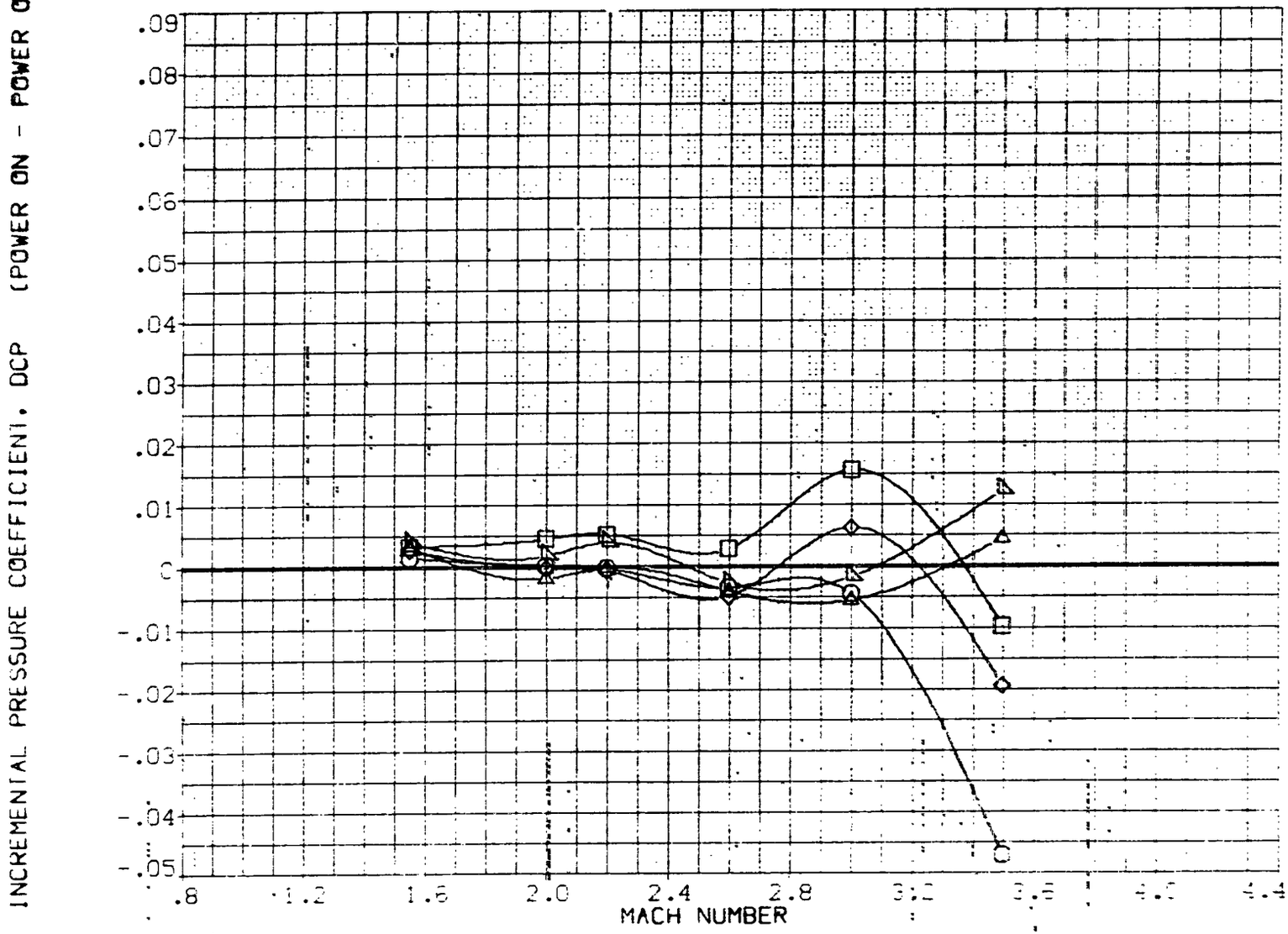


FIG. 114 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM.

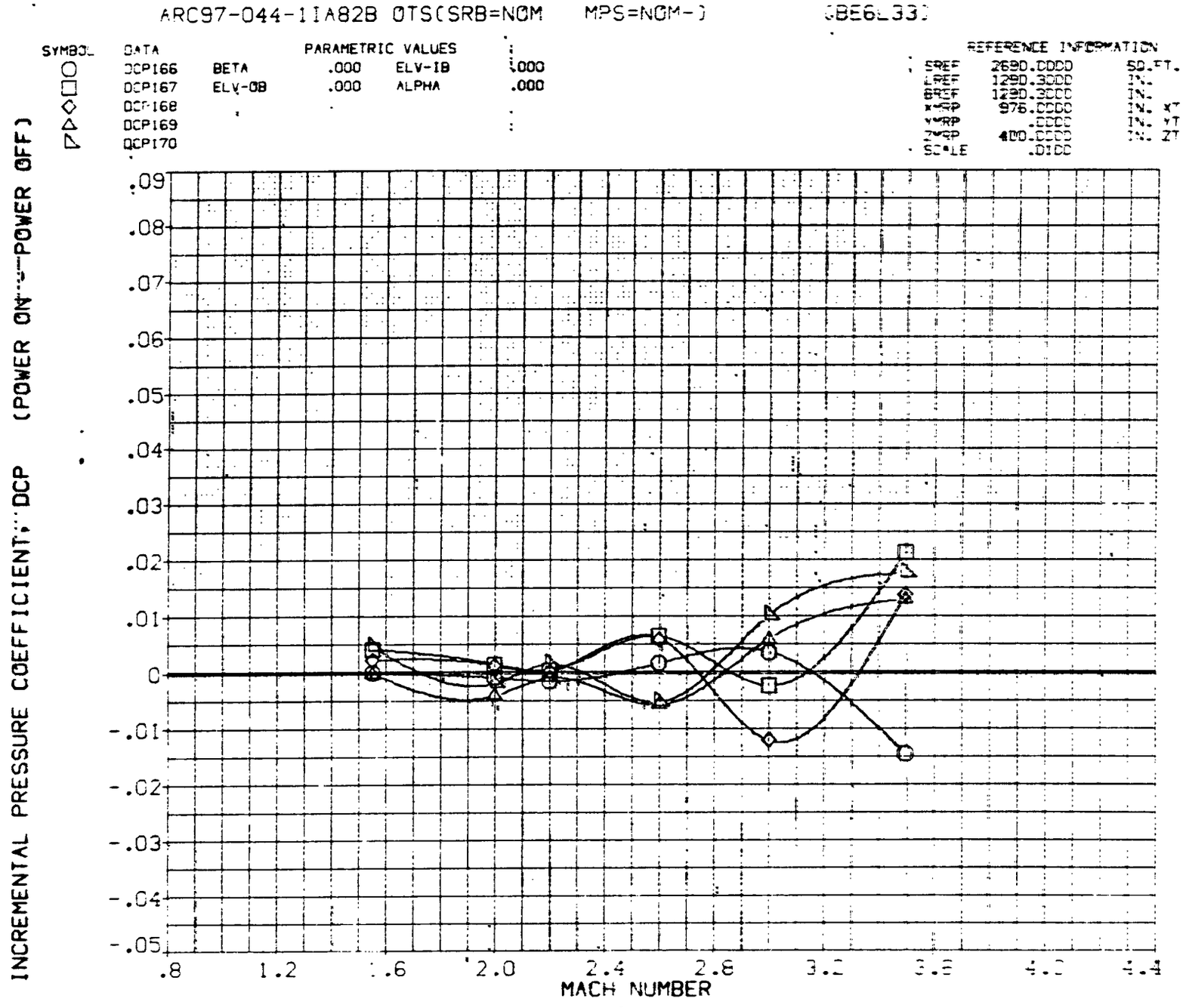


FIG. 114 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM-

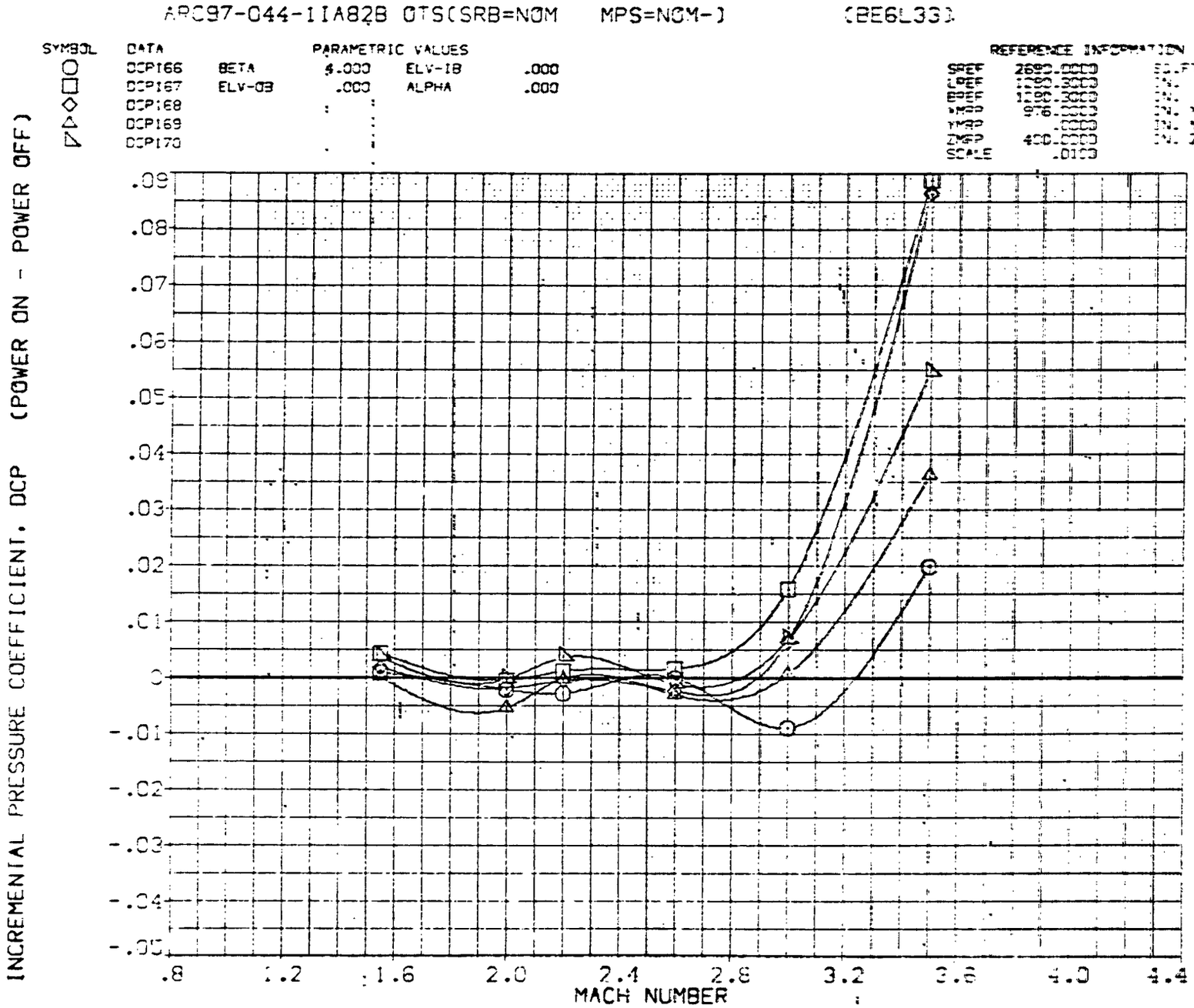


FIG. 114 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM-

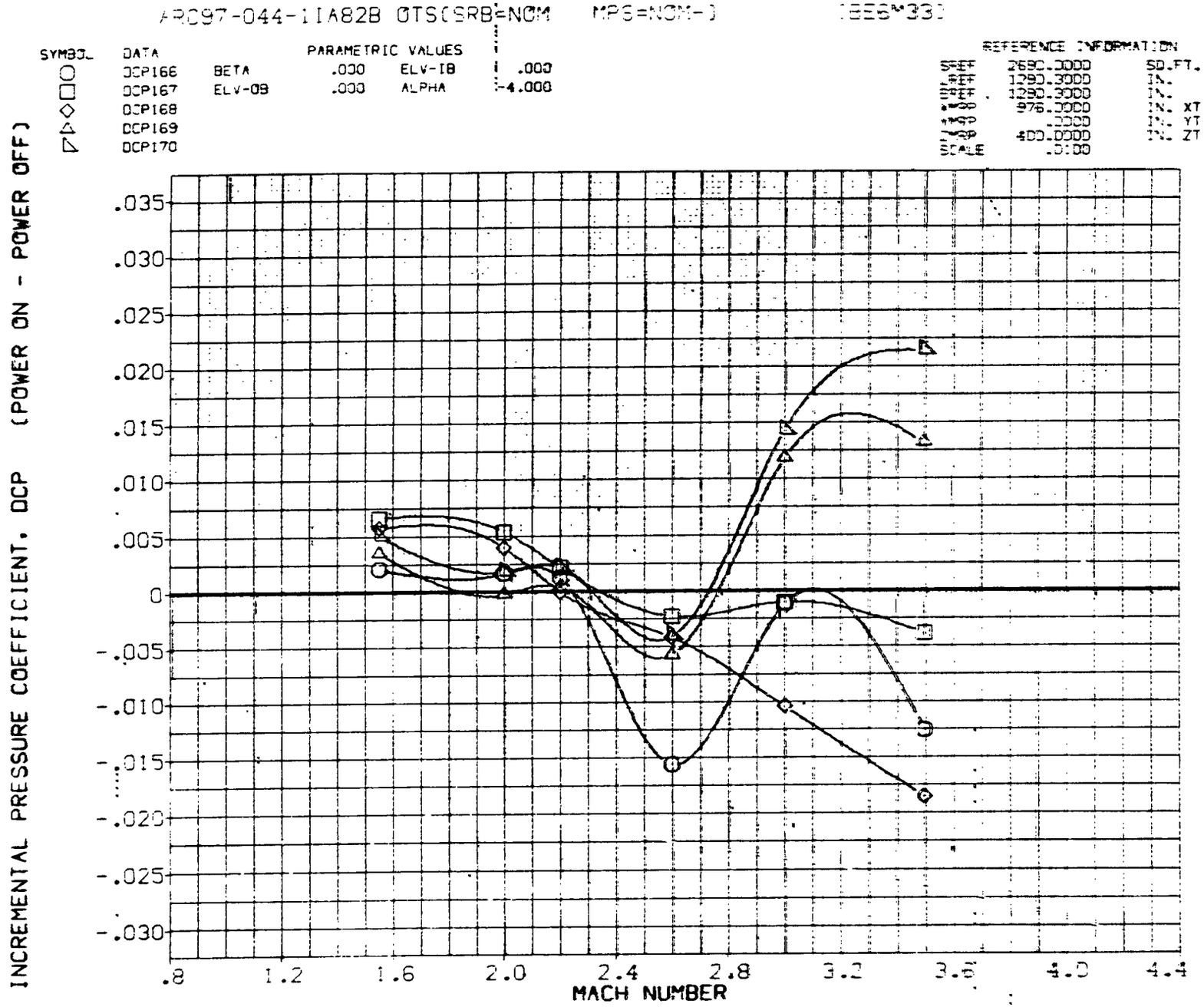


FIG. 114 OMS INCREMENTAL PRESSURE COEF.(LEFT). SRB=NOM. MPS=NOM-

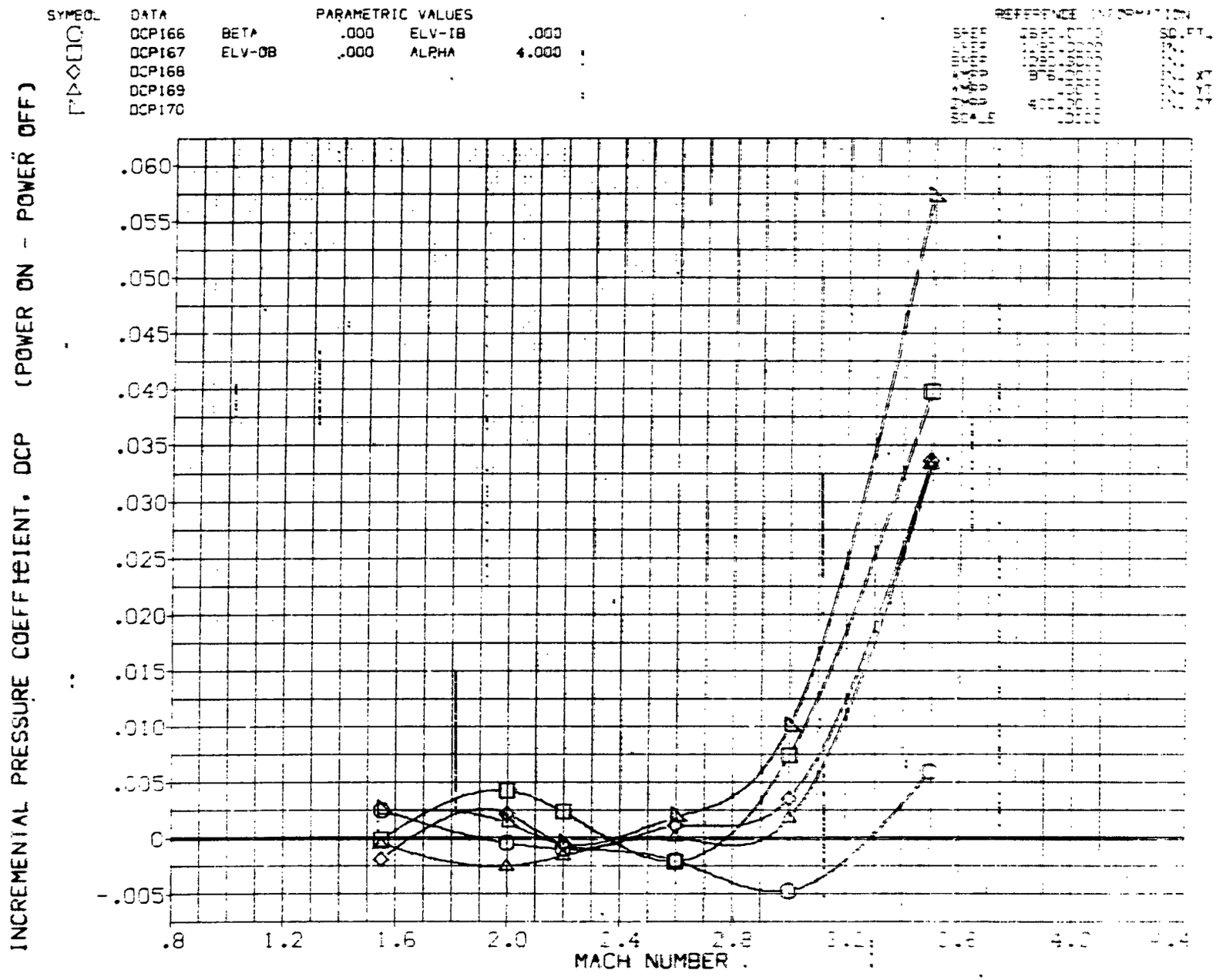


FIG. 114 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM,

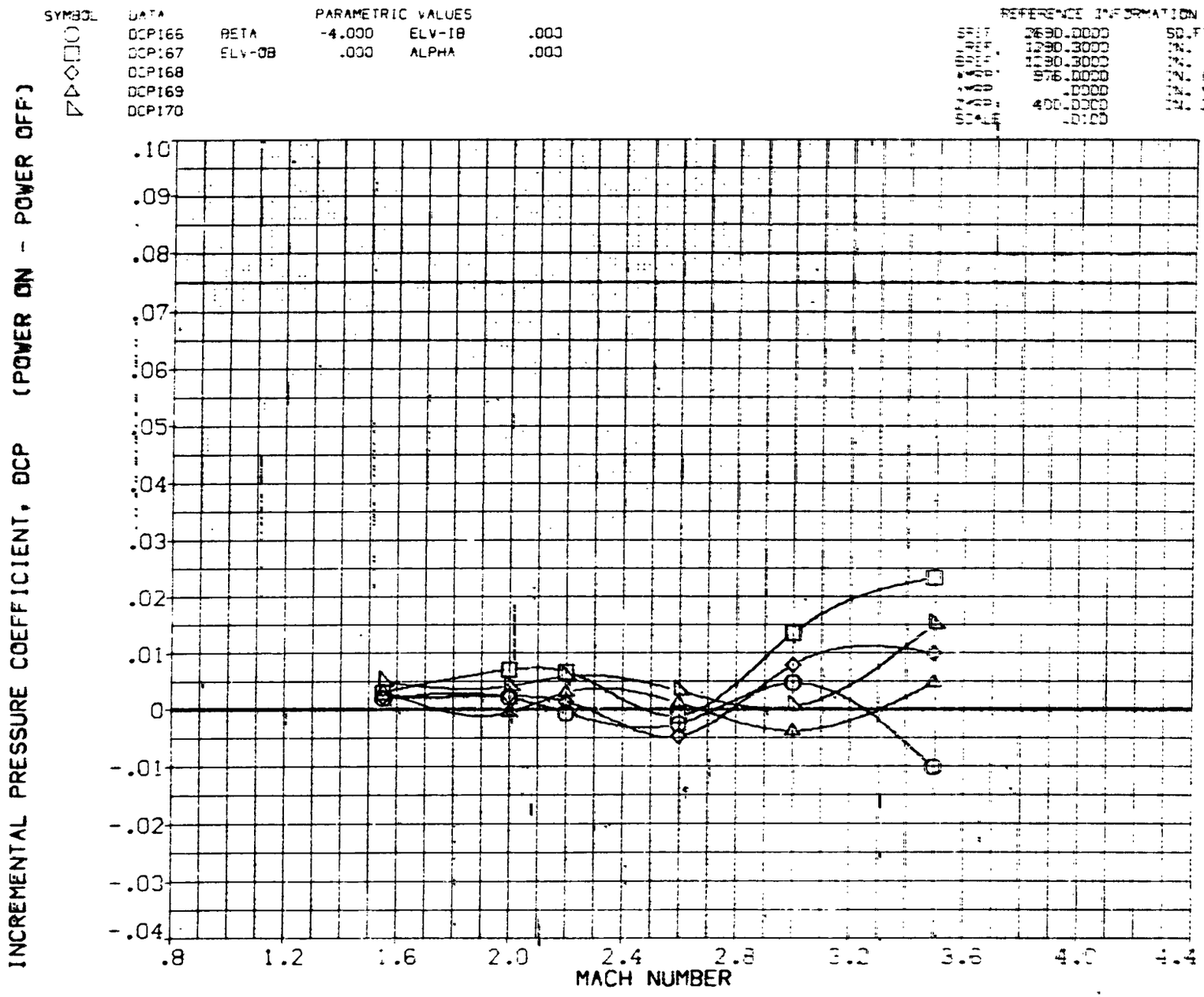


FIG. 115 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM

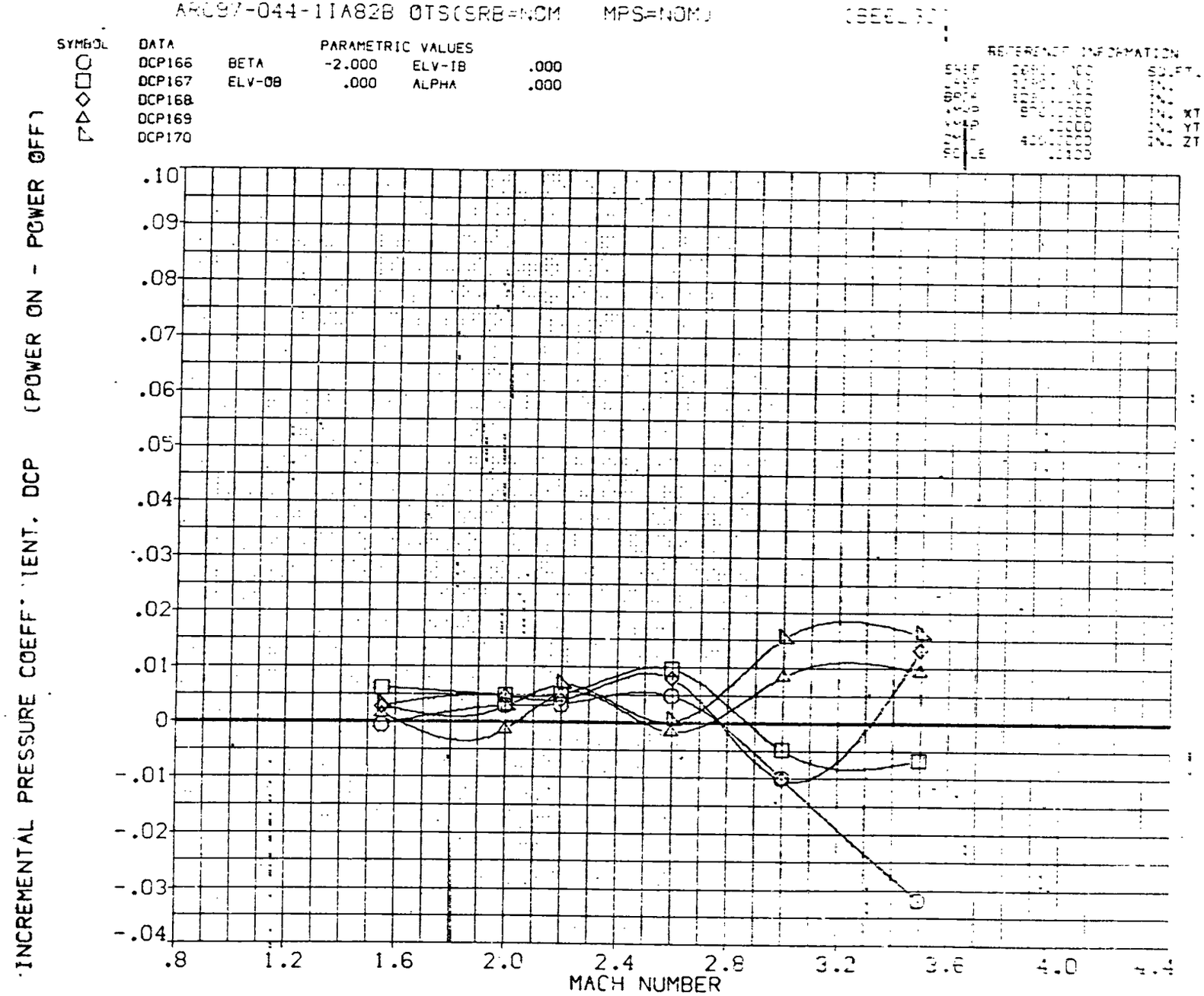


FIG.115 0MS INCREMENTAL PRESSURE C0EF.(LEFT) SRB=NOM, MPS=NOM

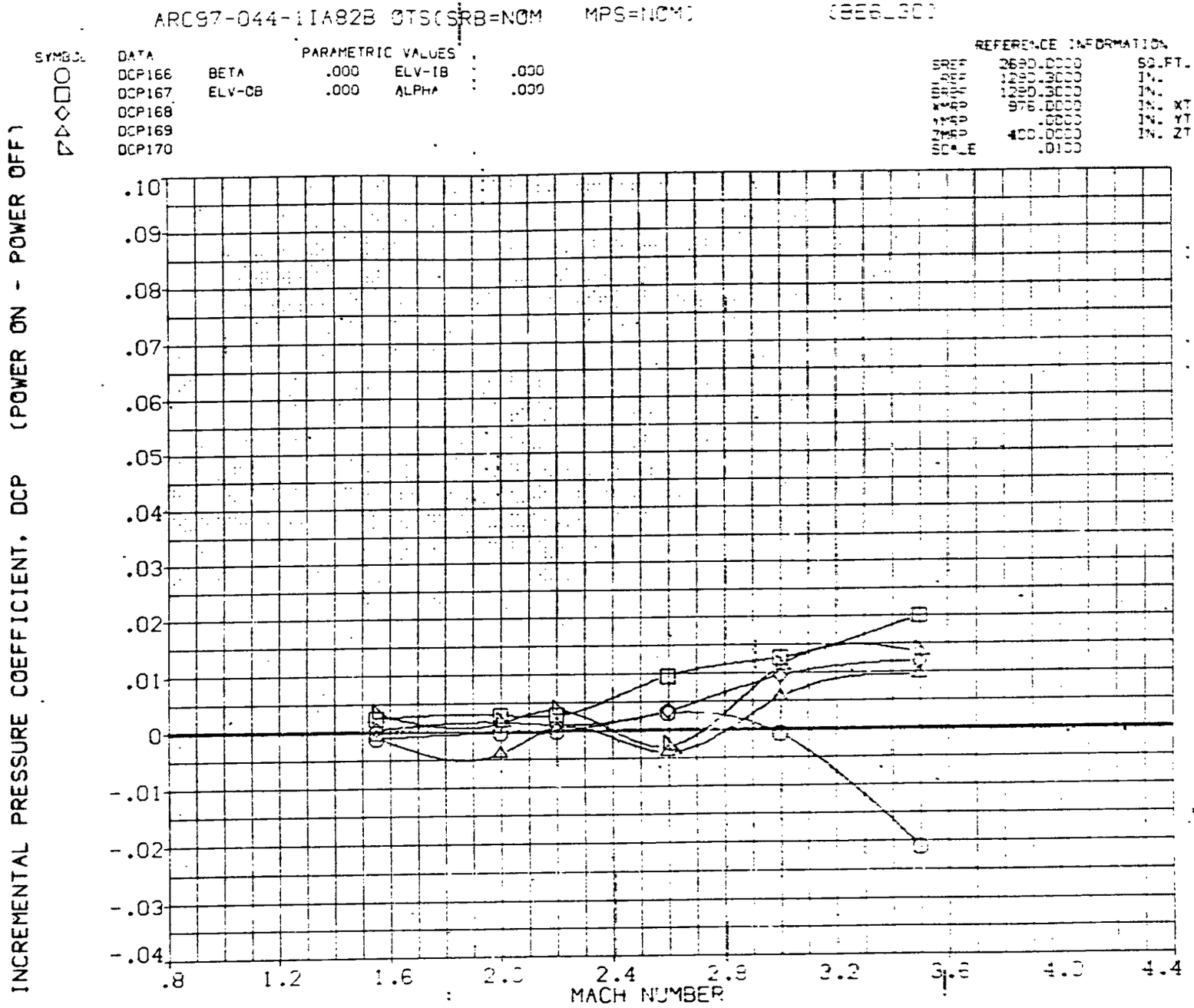


FIG. 115 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM

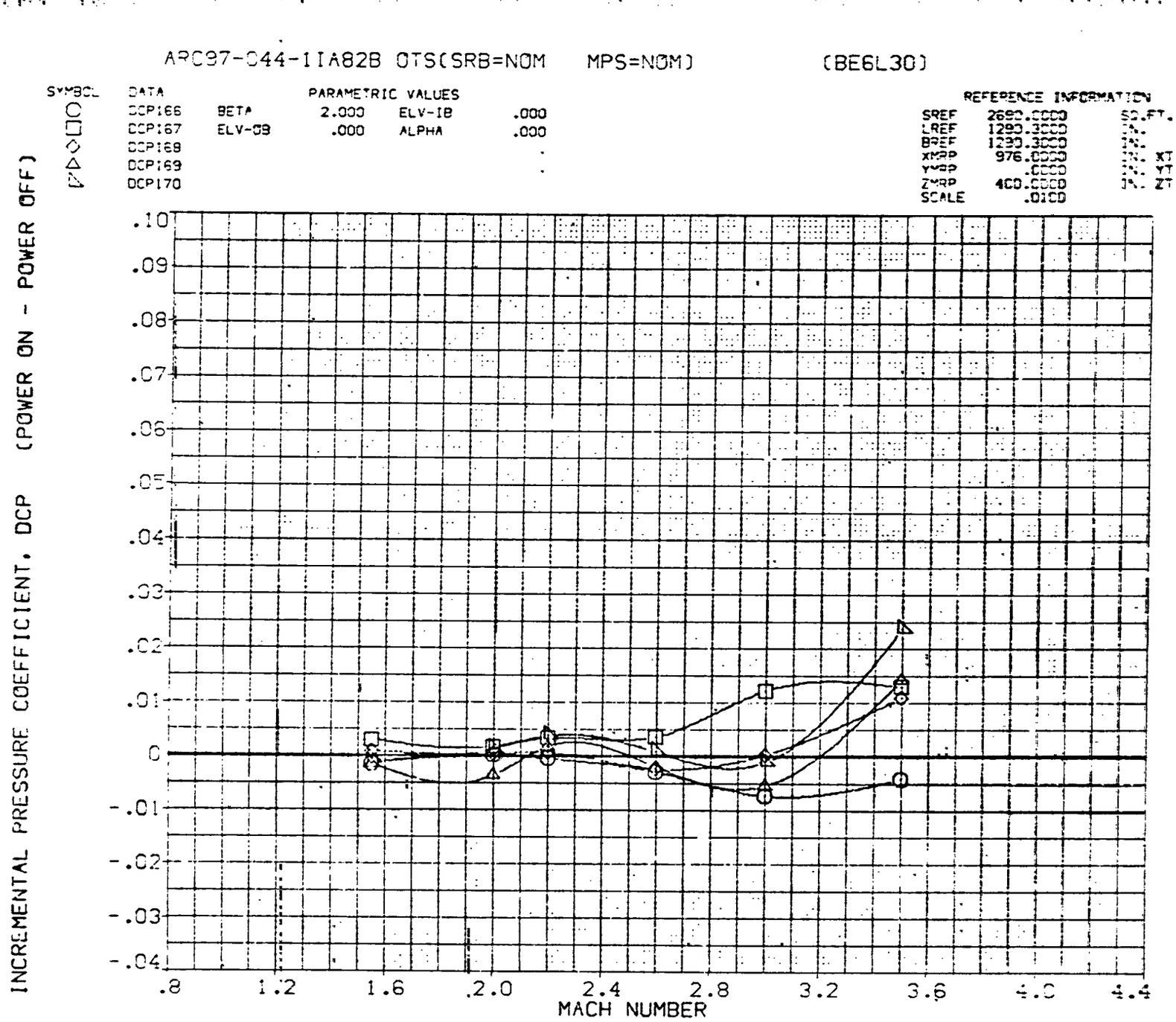


FIG. 115 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM

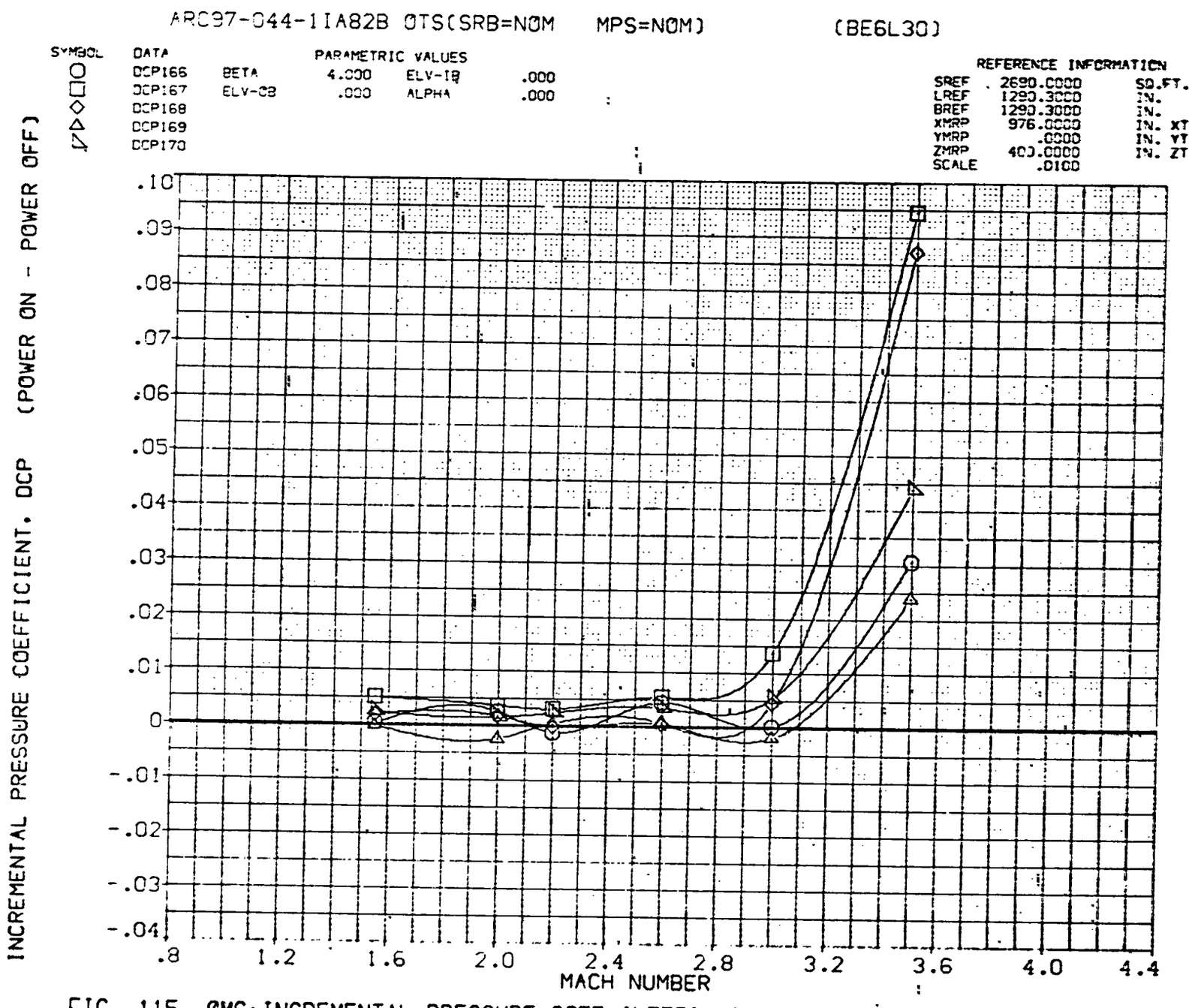


FIG. 115 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM

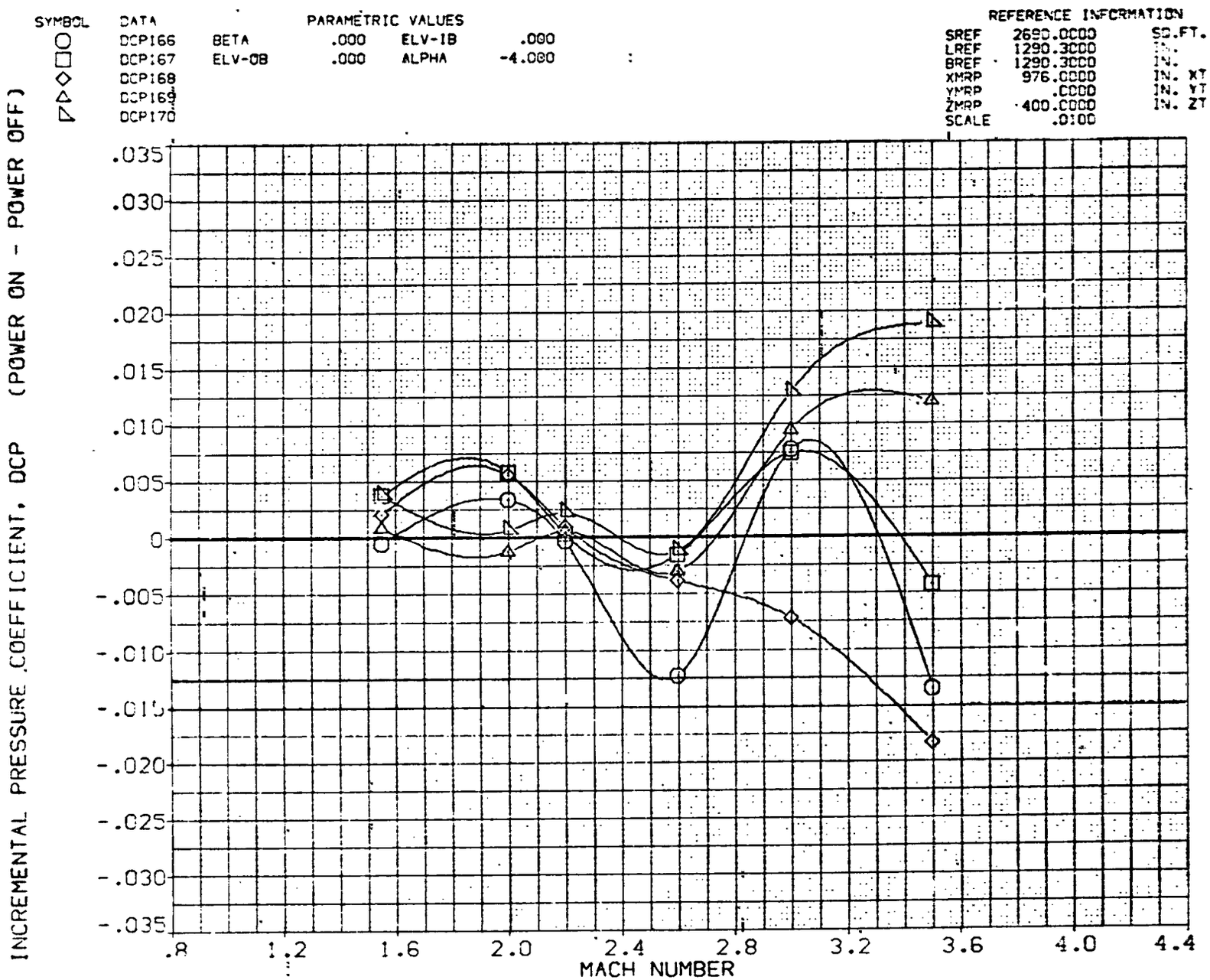


FIG. 115 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM

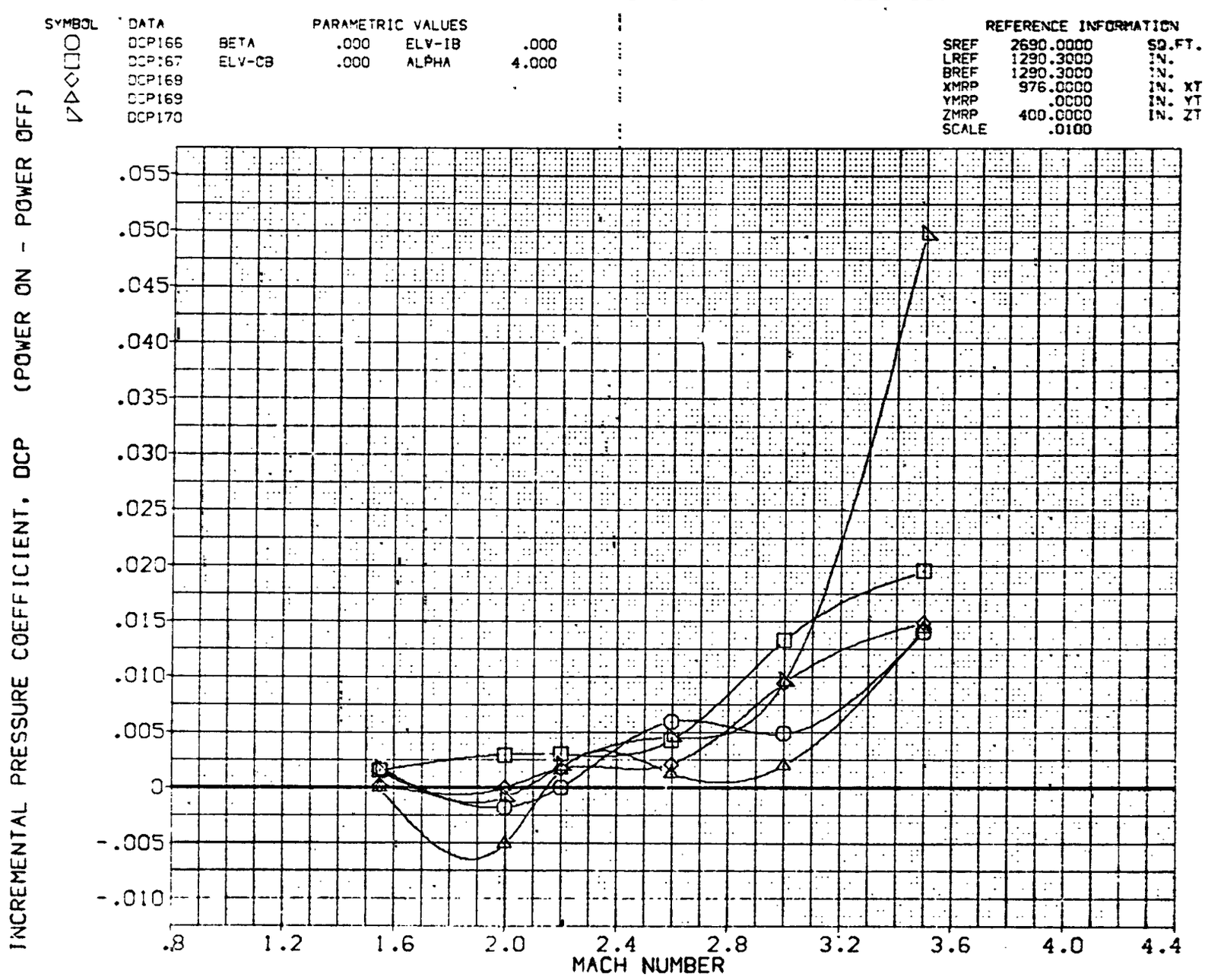


FIG. 115 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM

ARC37-044-1IA82B OTS(SRB=NOM MPS=NOM+) (BE6L34)

SYMBOL	DATA		PARAMETRIC VALUES		
○	OCP166	BETA	-4.000	ELV-IB	.000
□	OCP167	ELV-OB	.000	ALPHA	.000
◇	OCP168				
△	OCP169				
▽	OCP170				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

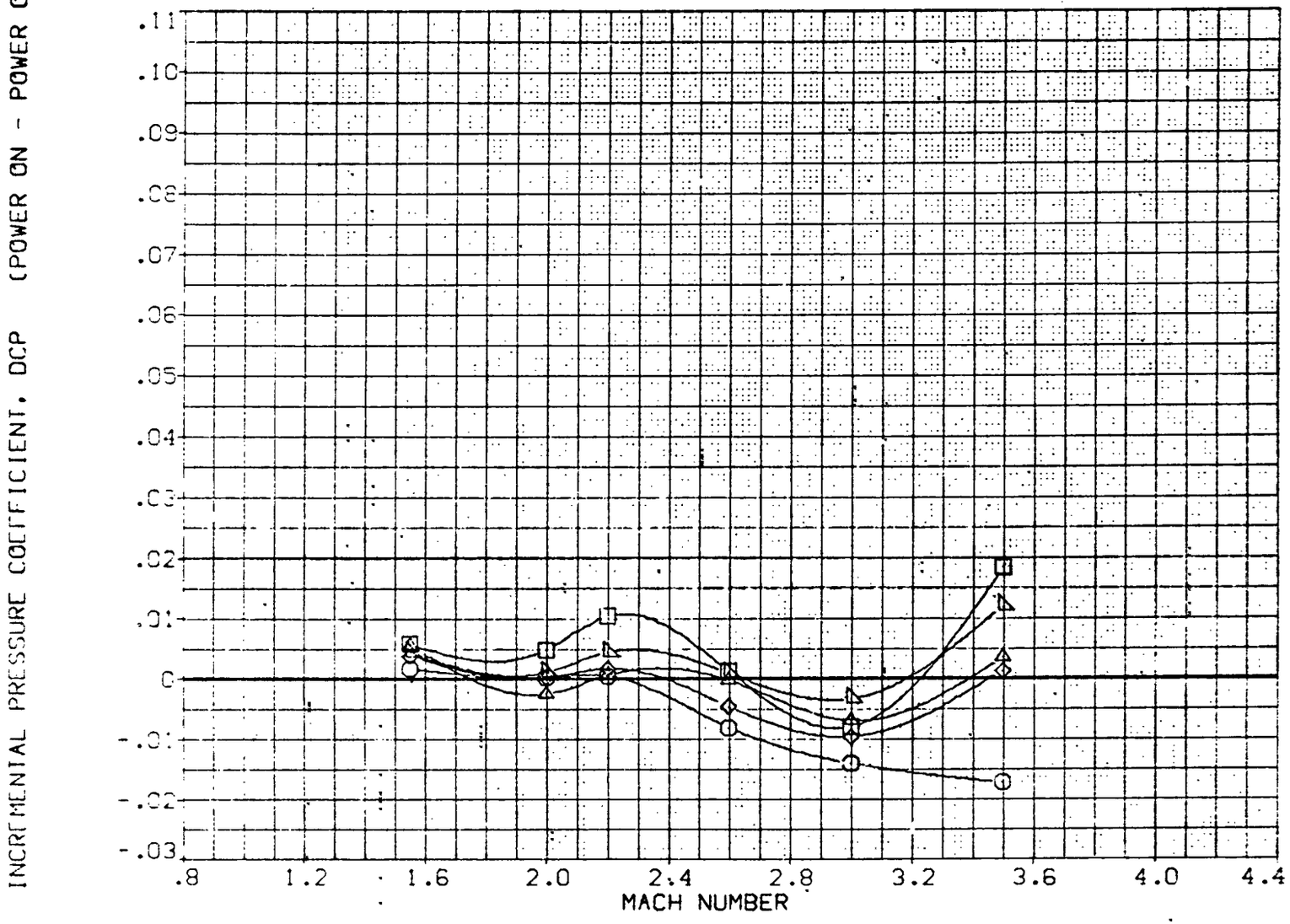


FIG. 116 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM+

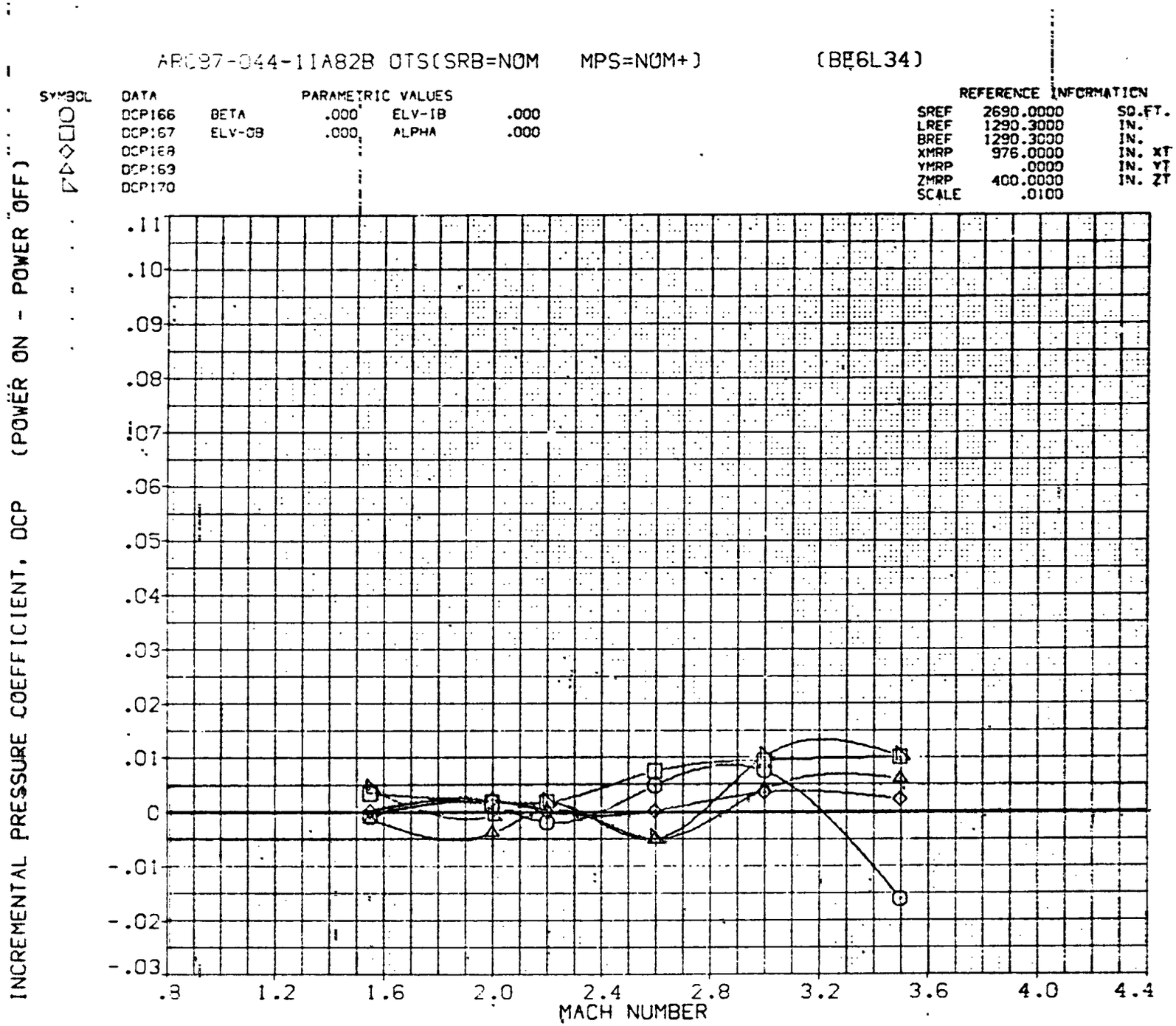


FIG. 116 OMS INCREMENTAL PRESSURE COEF.(LEFT) : SRB=NOM, MPS=NOM+

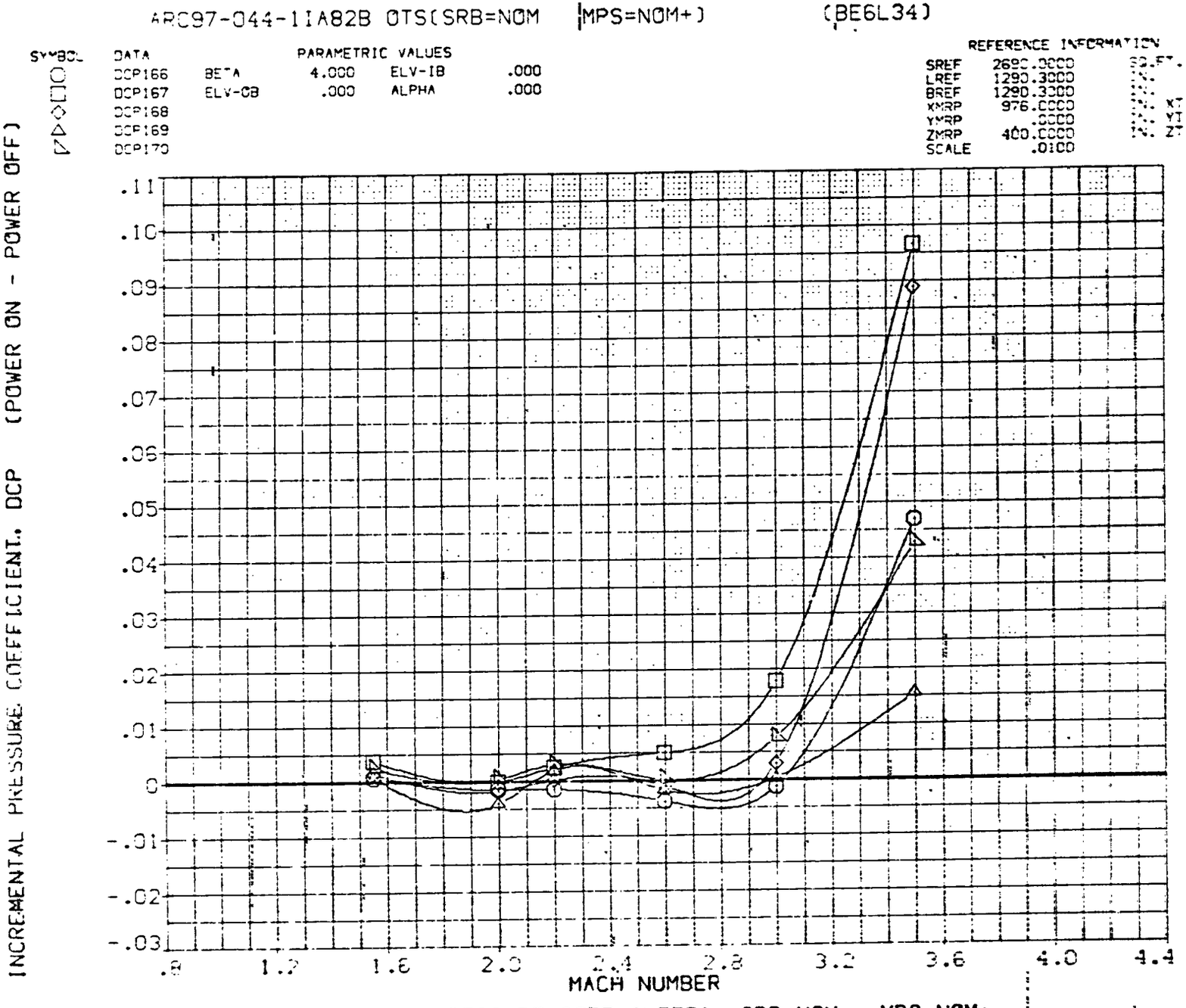


FIG. 116 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM+

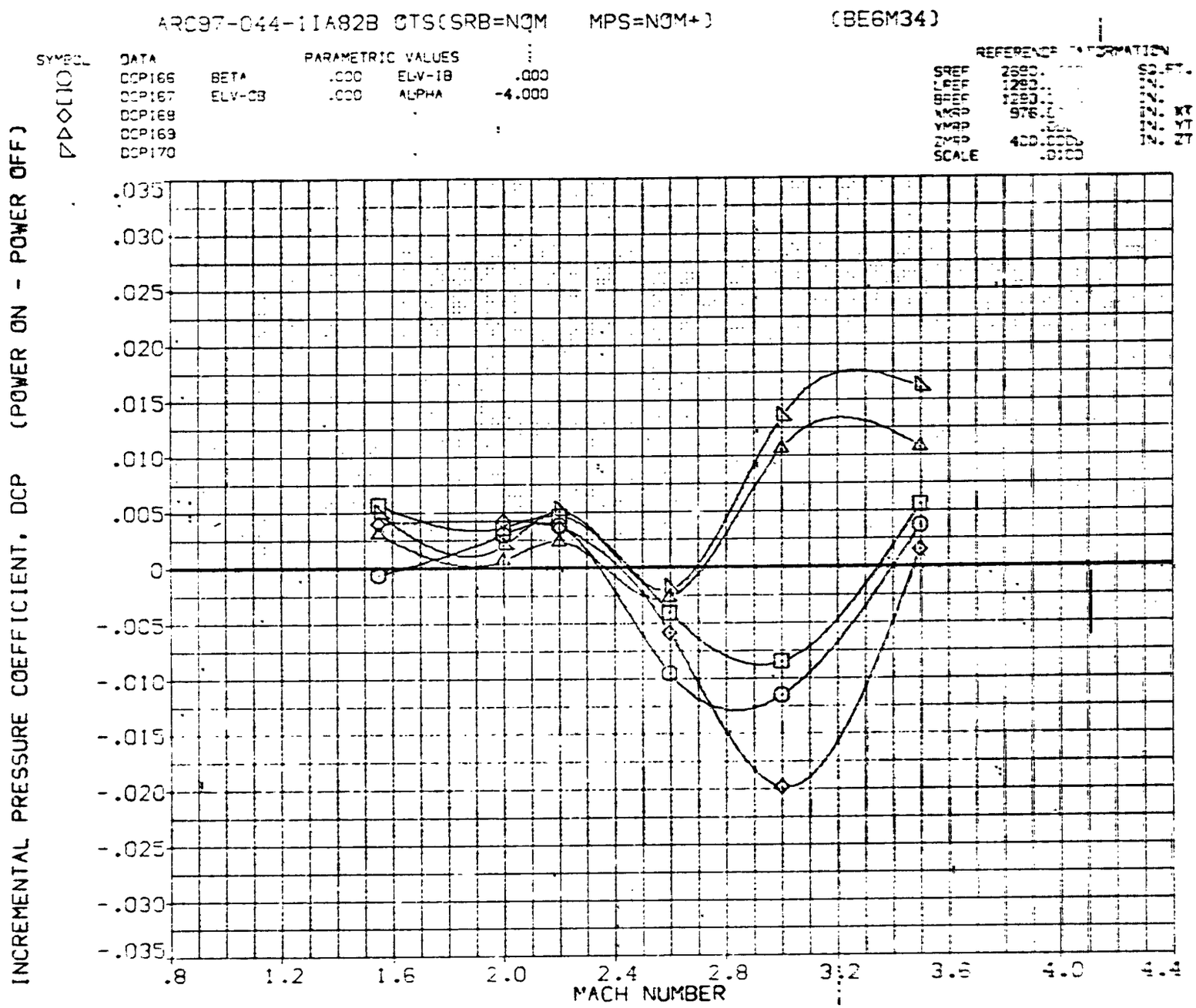


FIG. 116 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM+

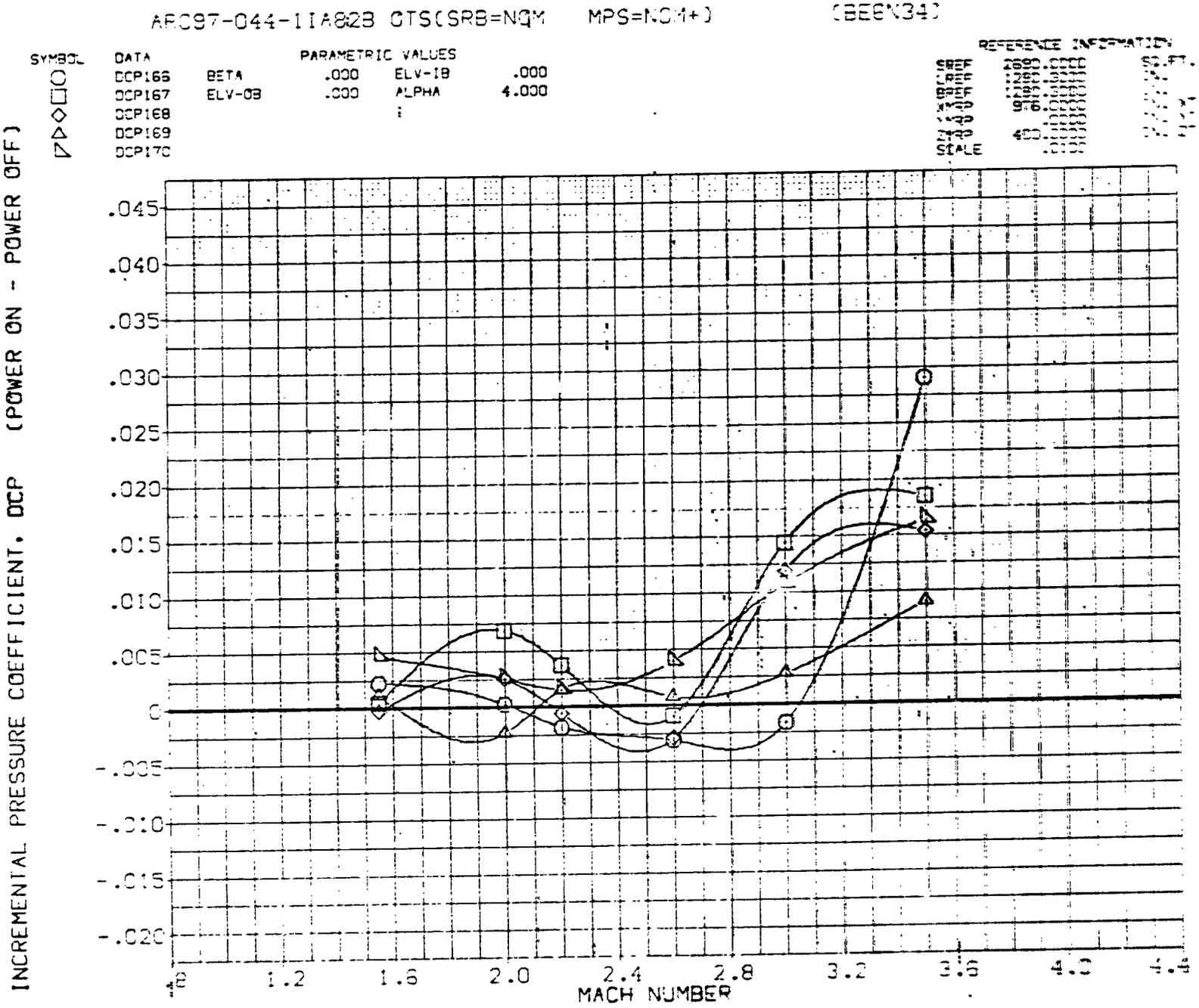


FIG. 116 OMS INCREMENTAL PRESSURE COEF.(LEFT) SRB=NOM, MPS=NOM+

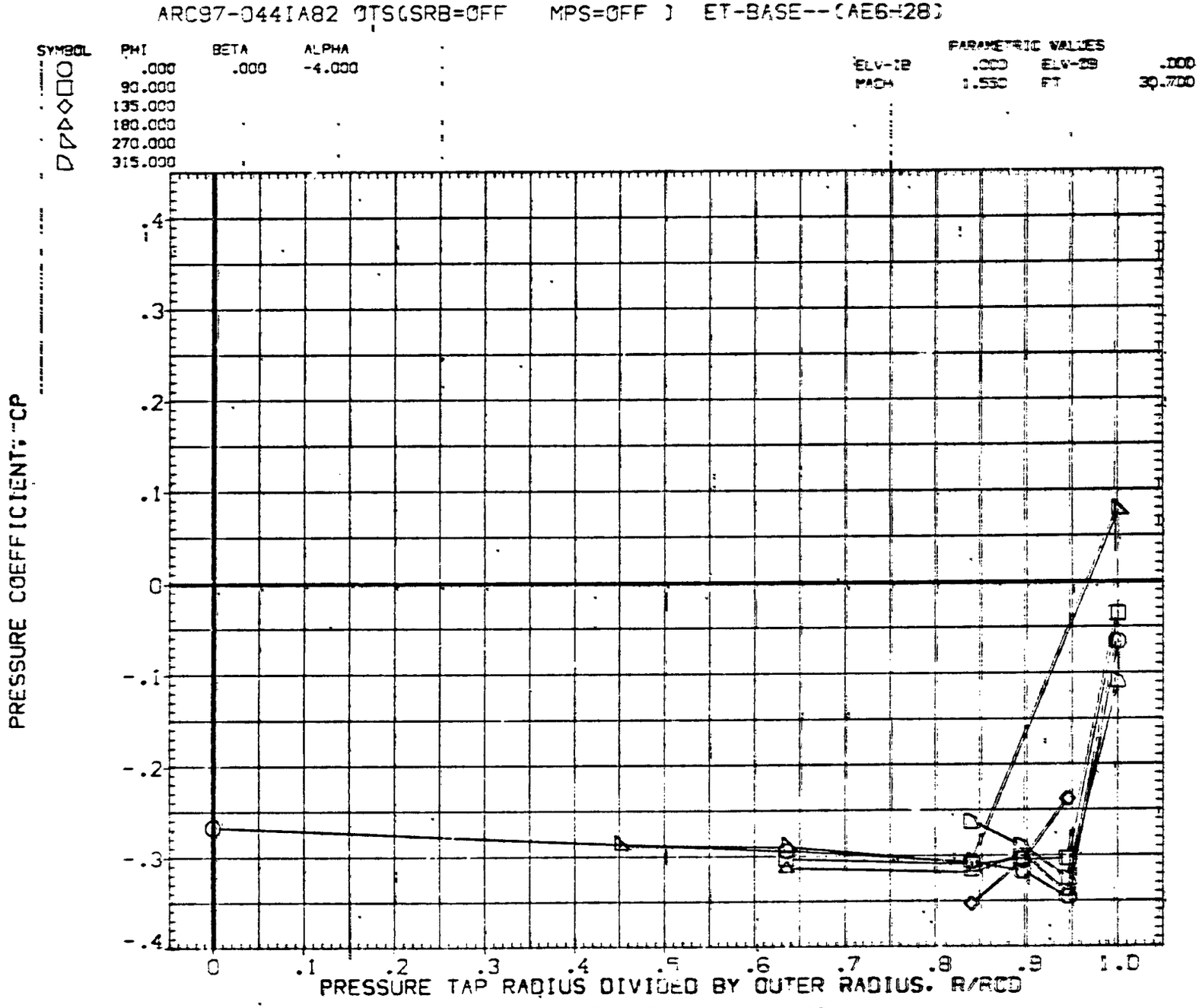


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

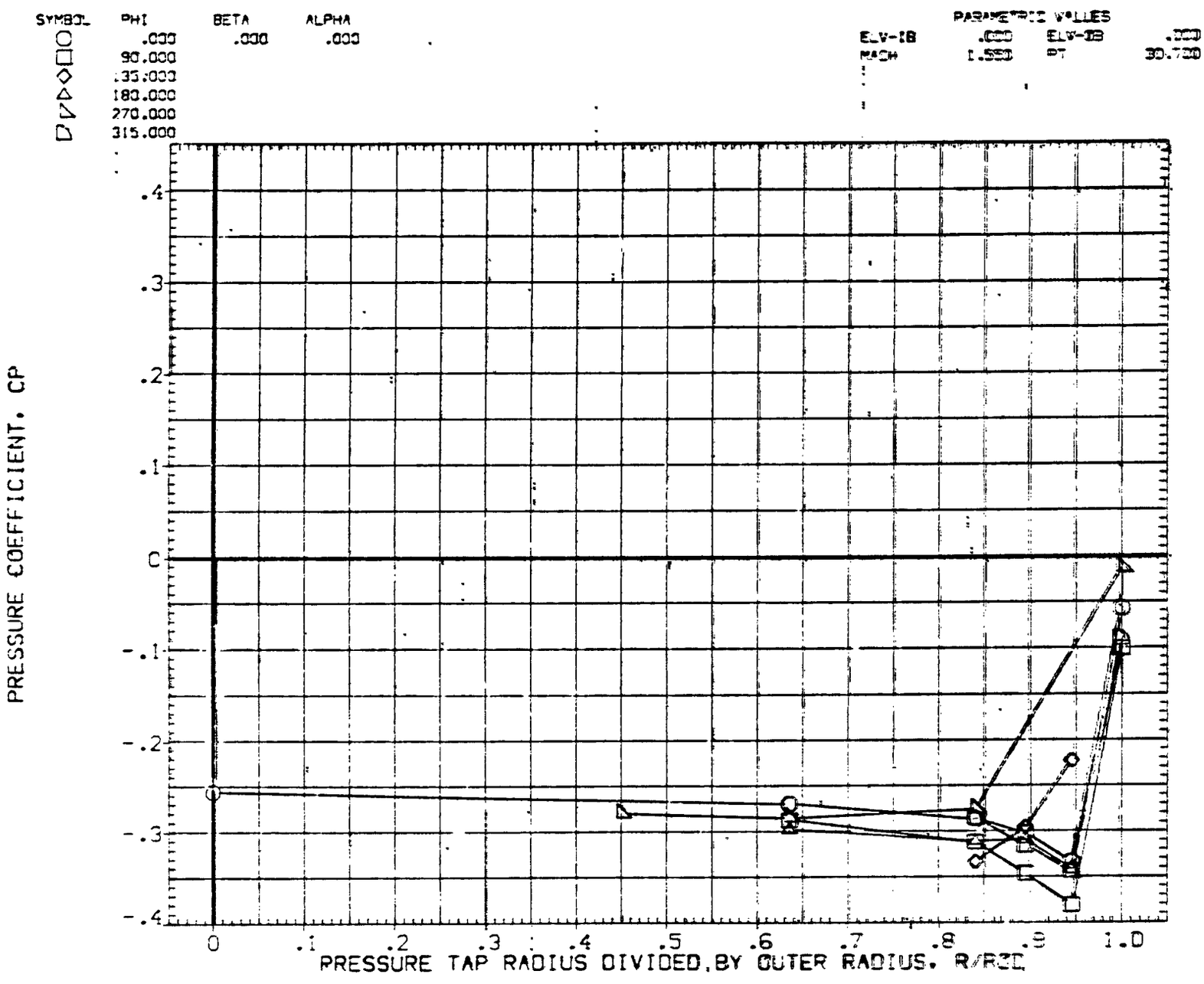


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

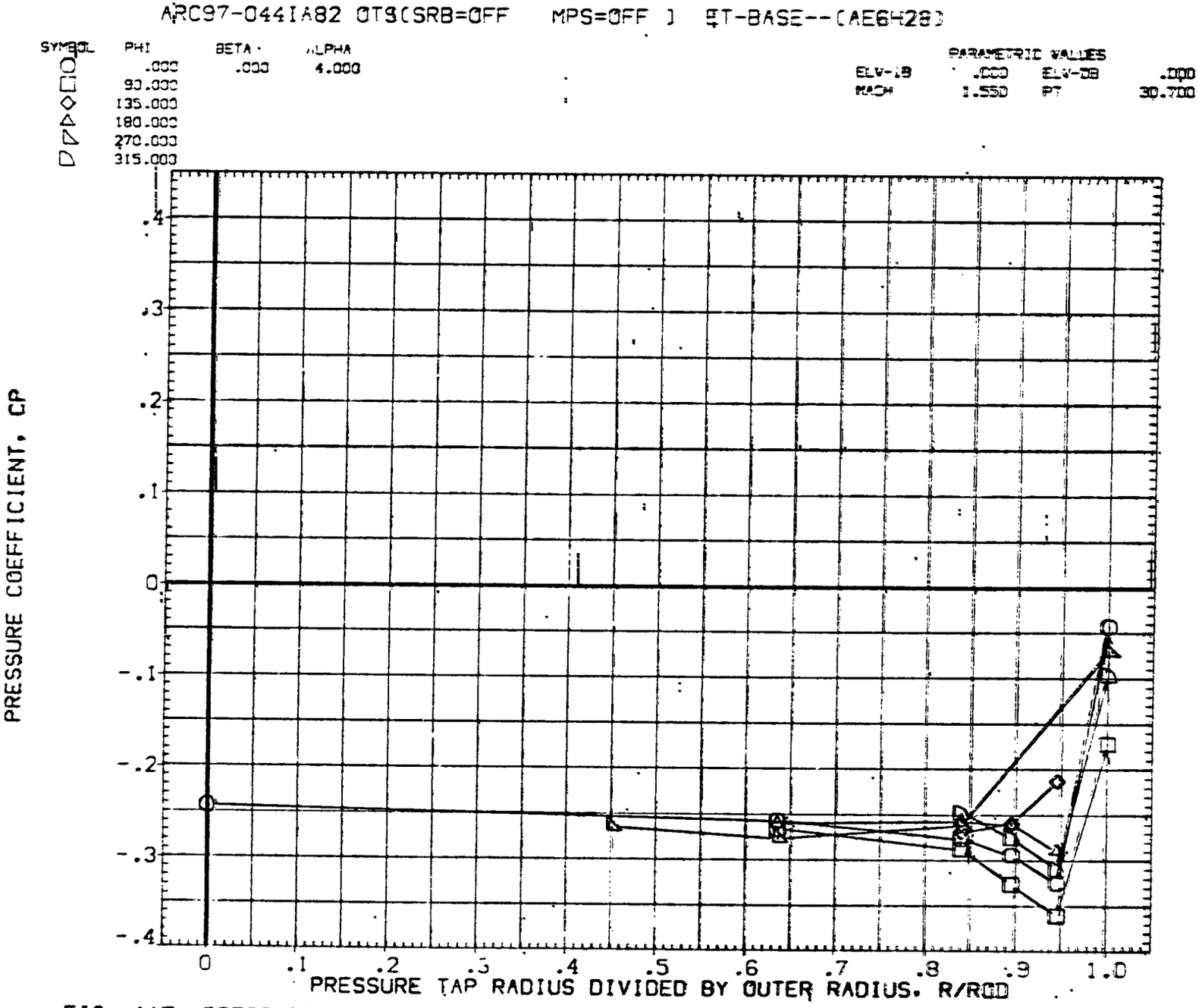


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

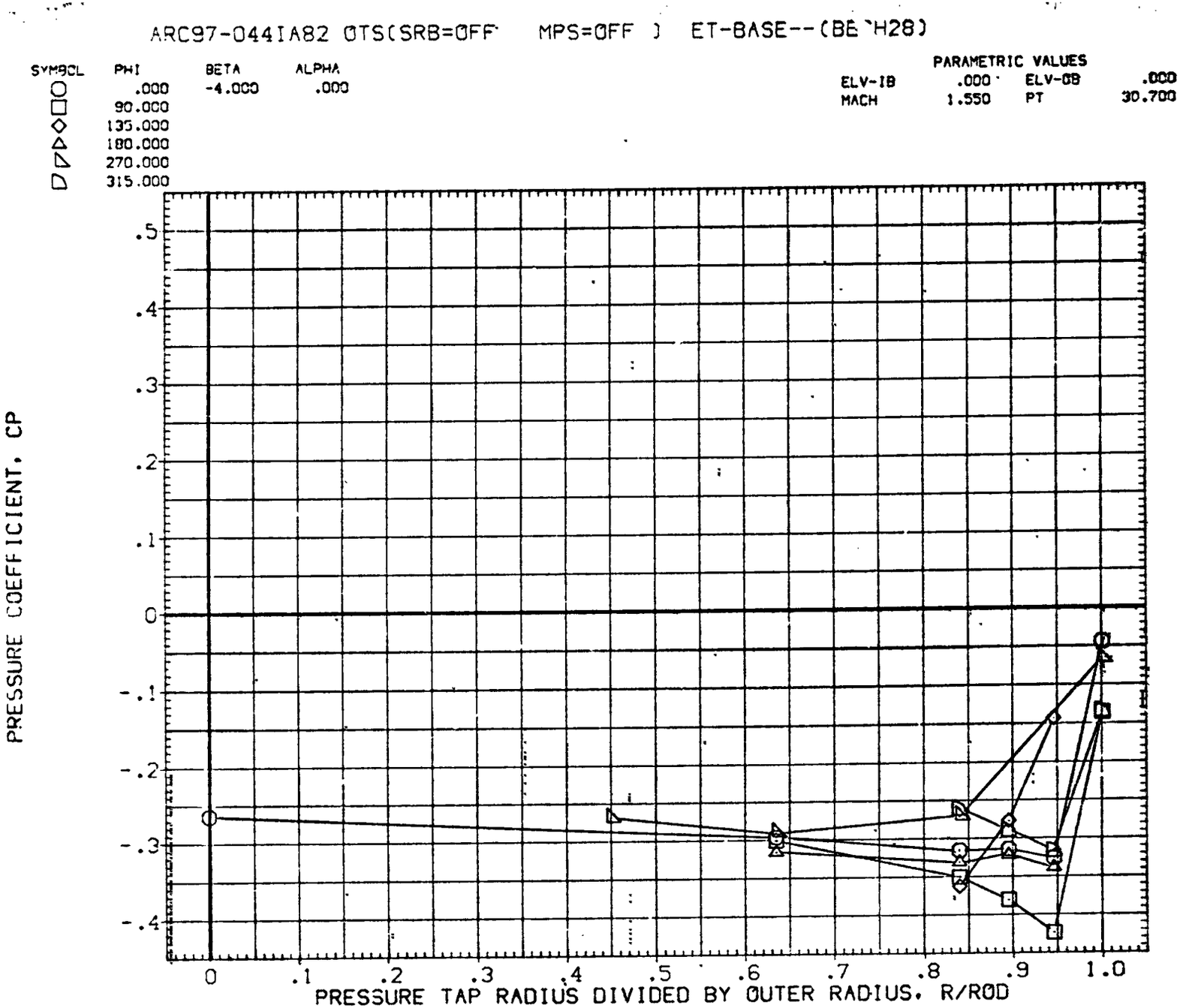


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

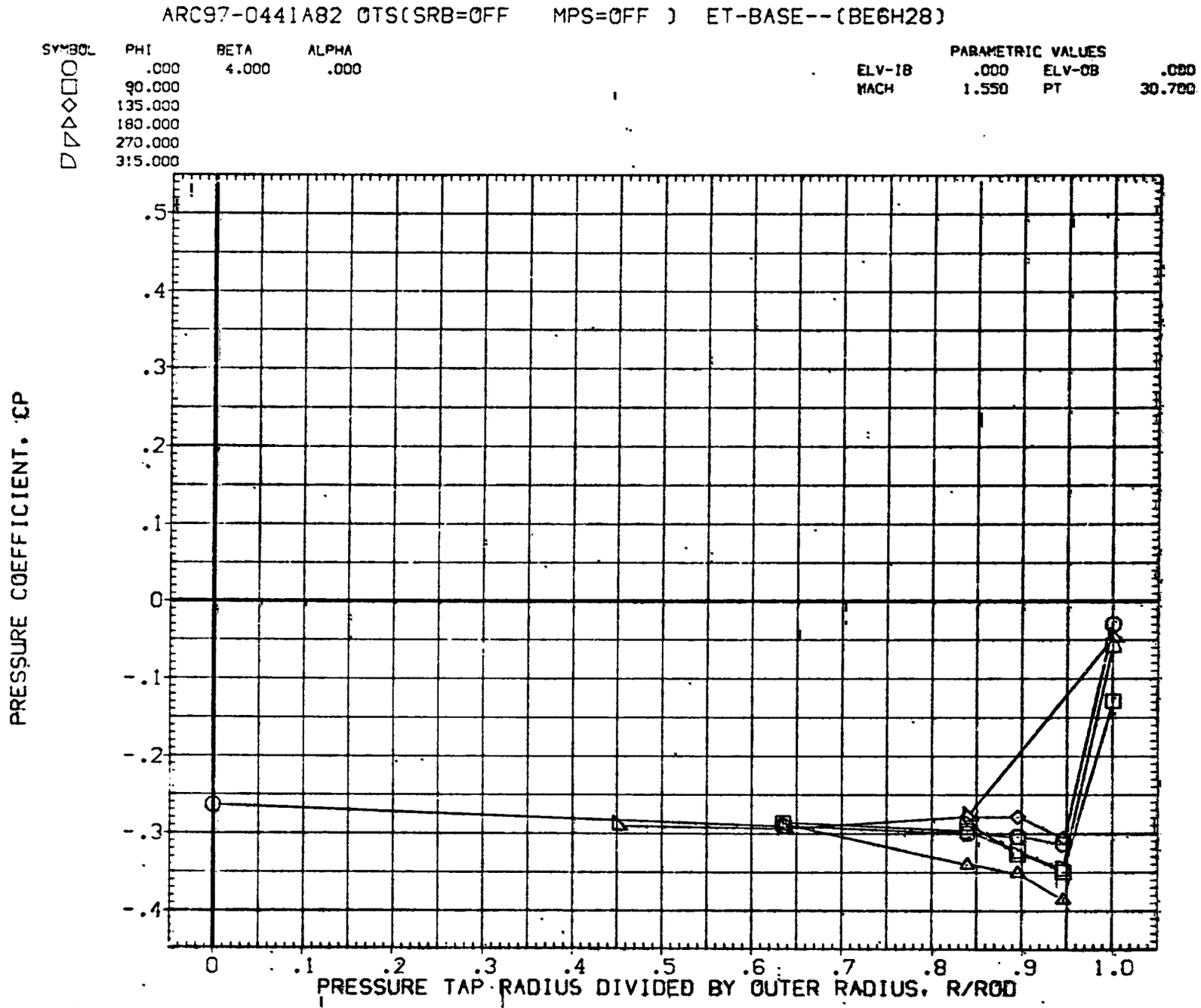


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

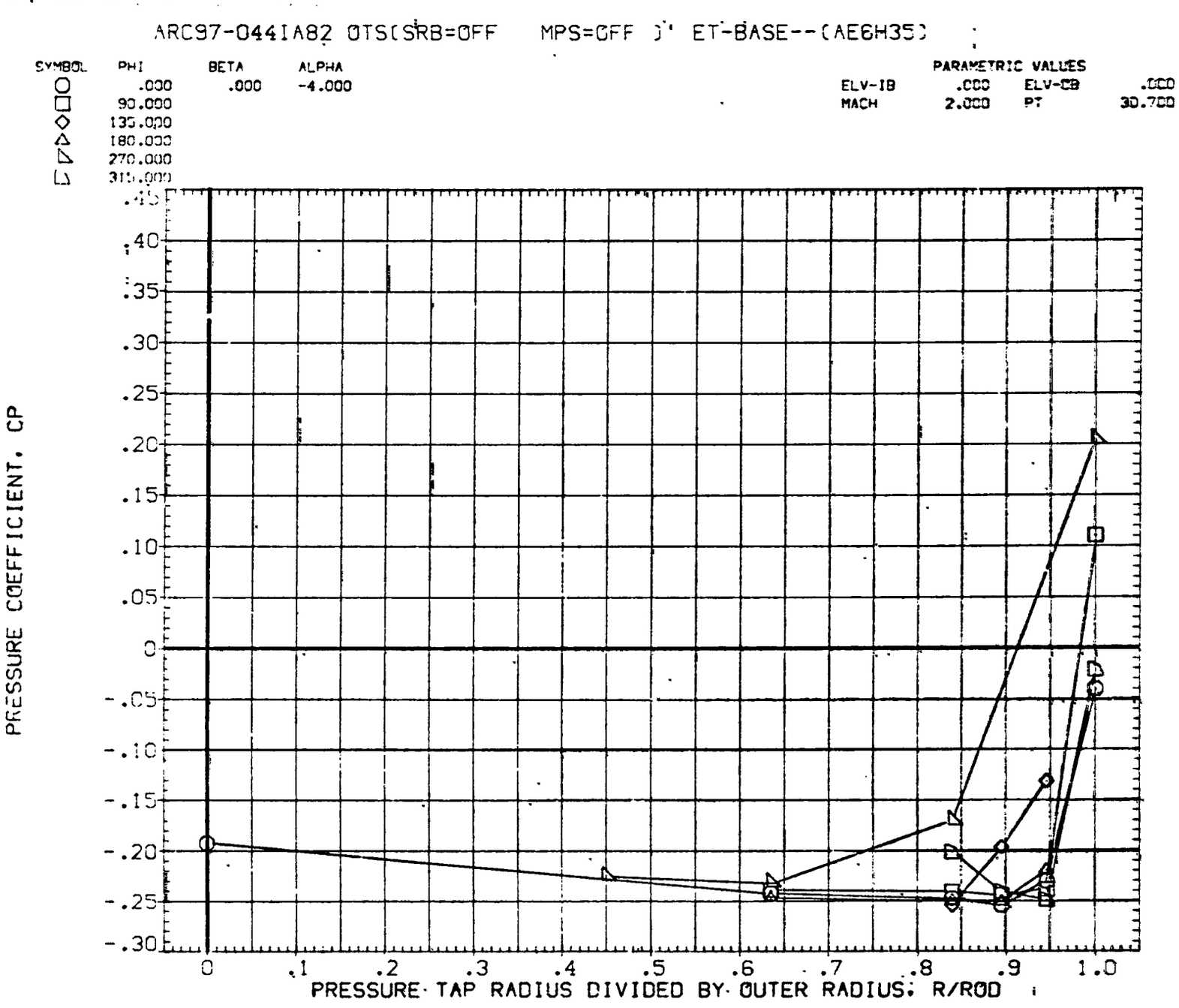


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

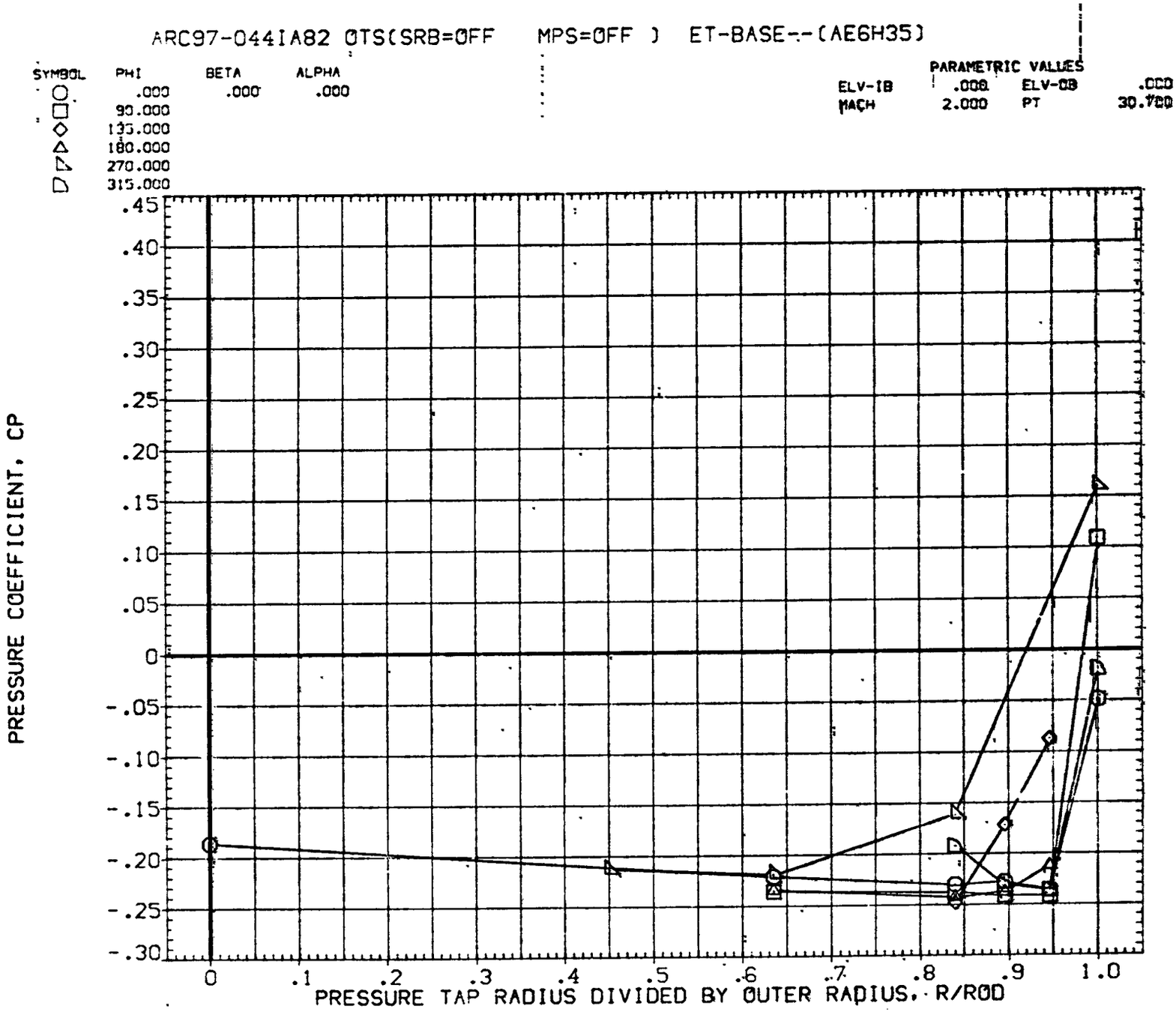


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

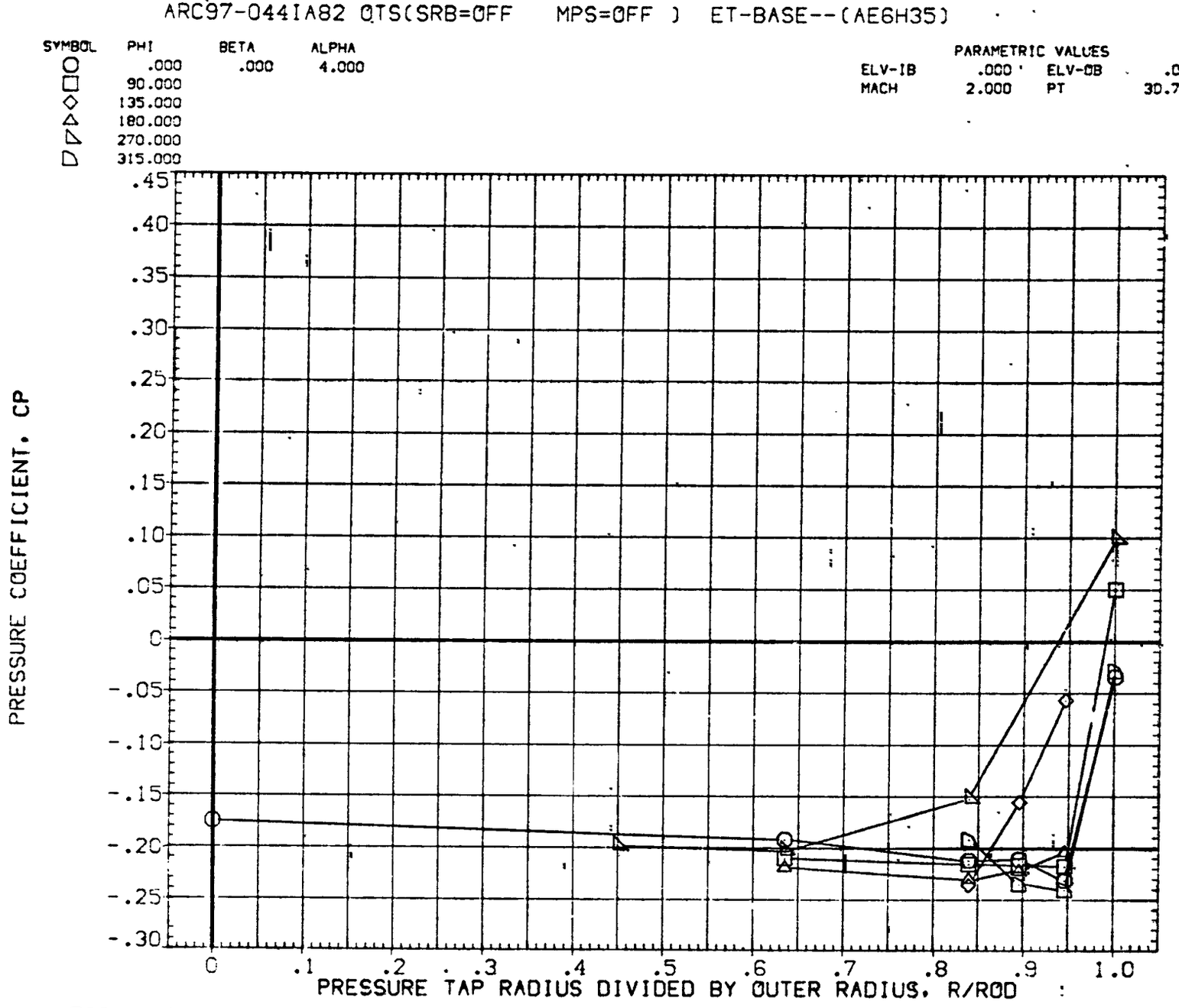


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

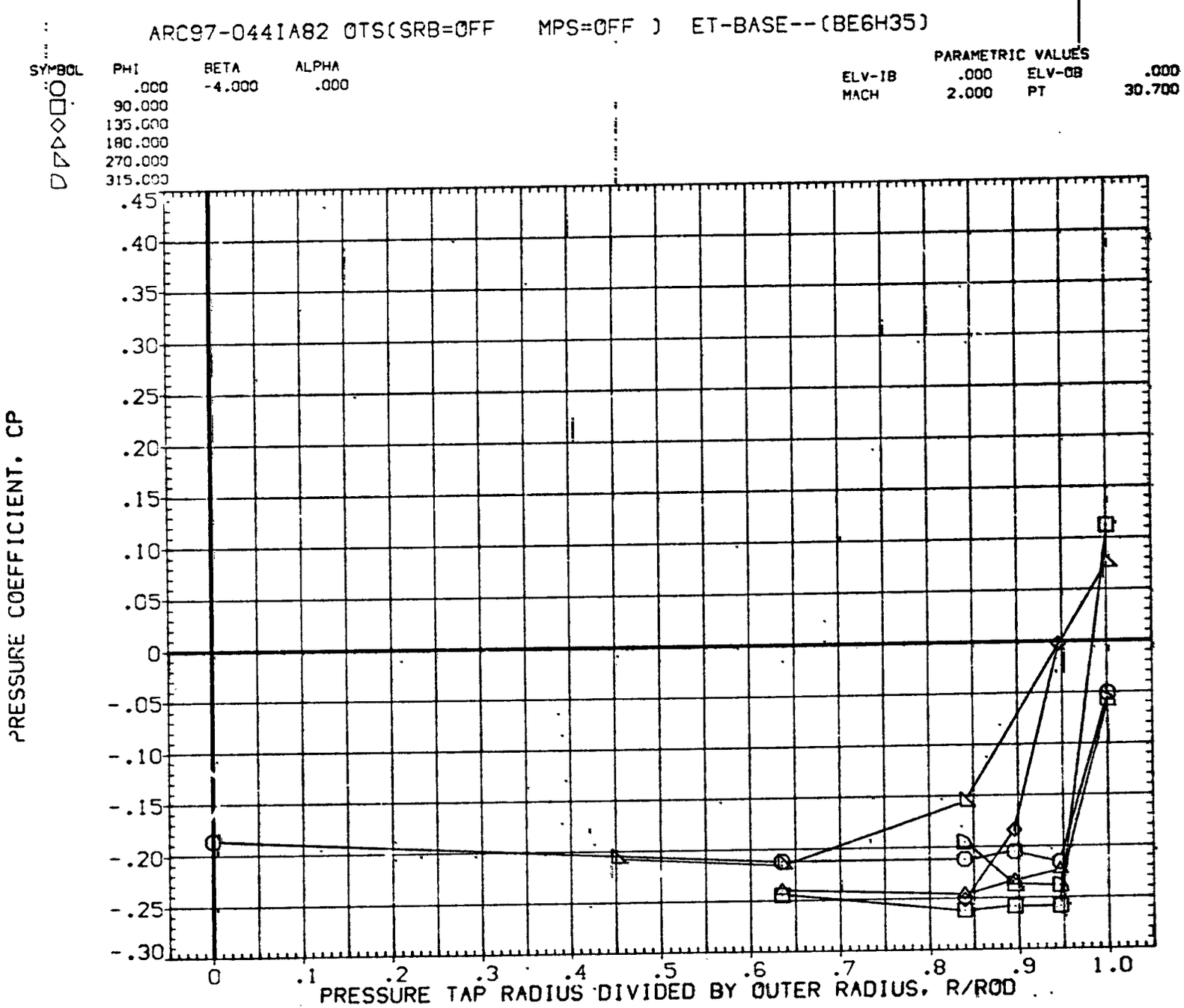


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

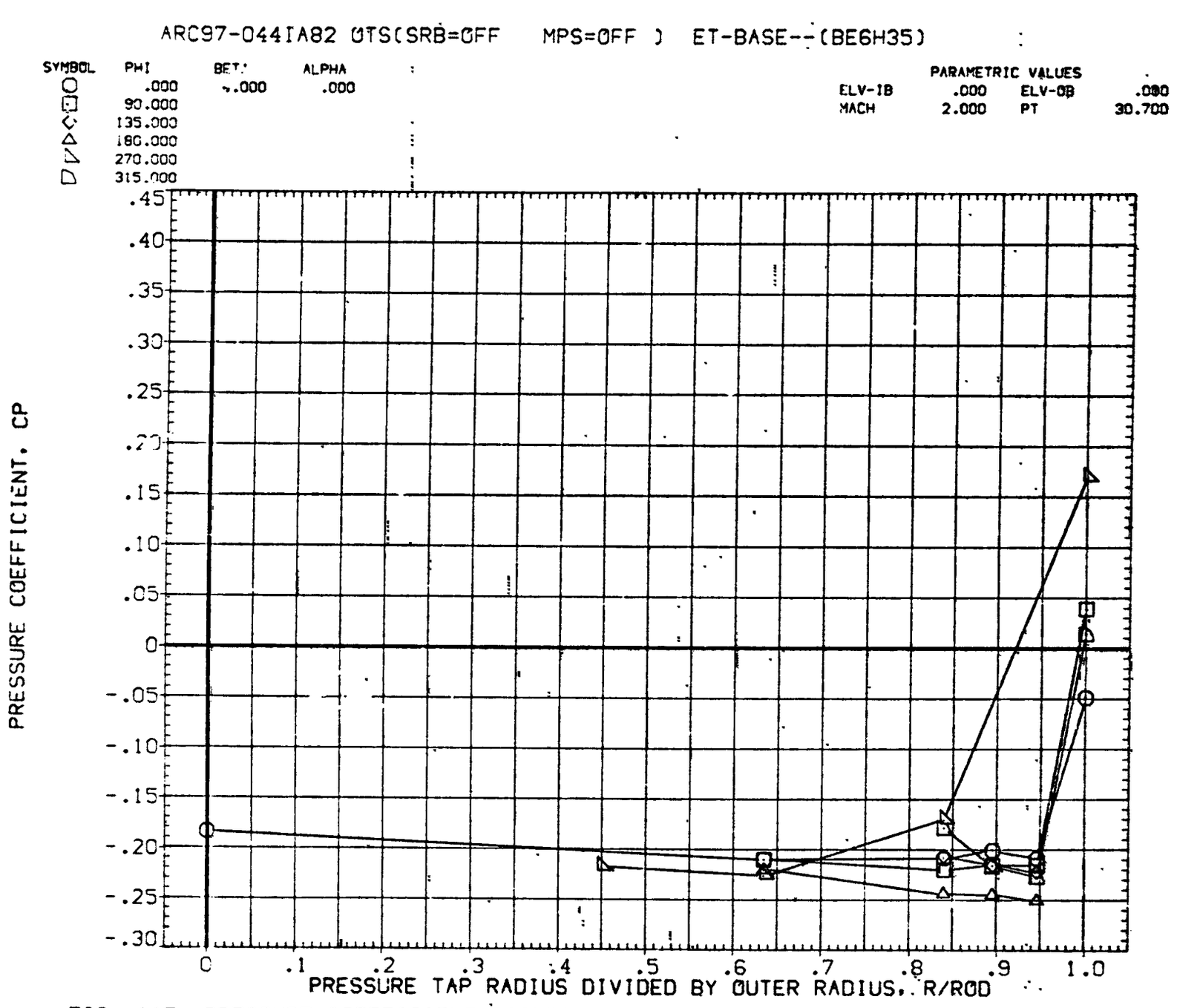


FIG. 117. PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

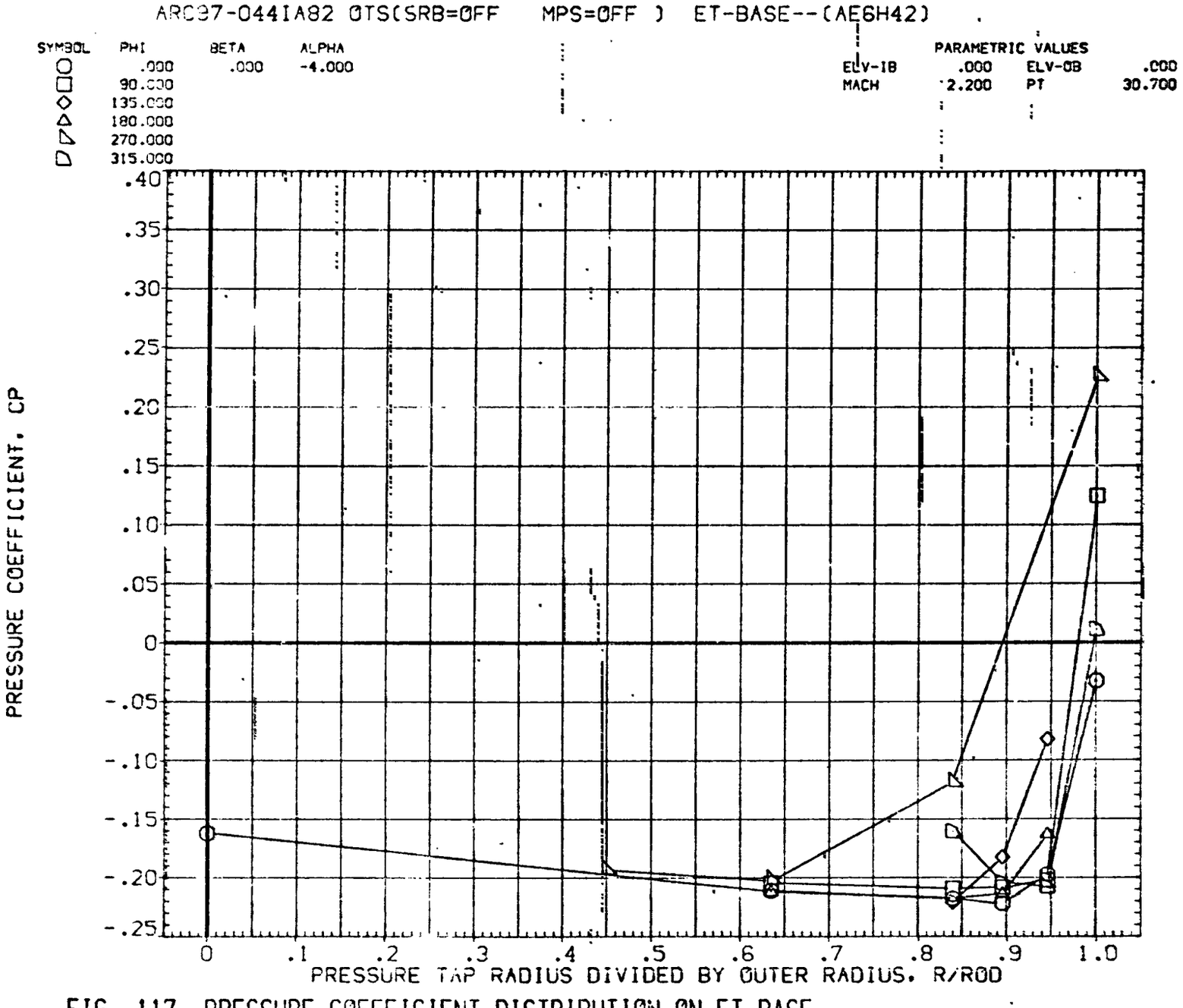


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

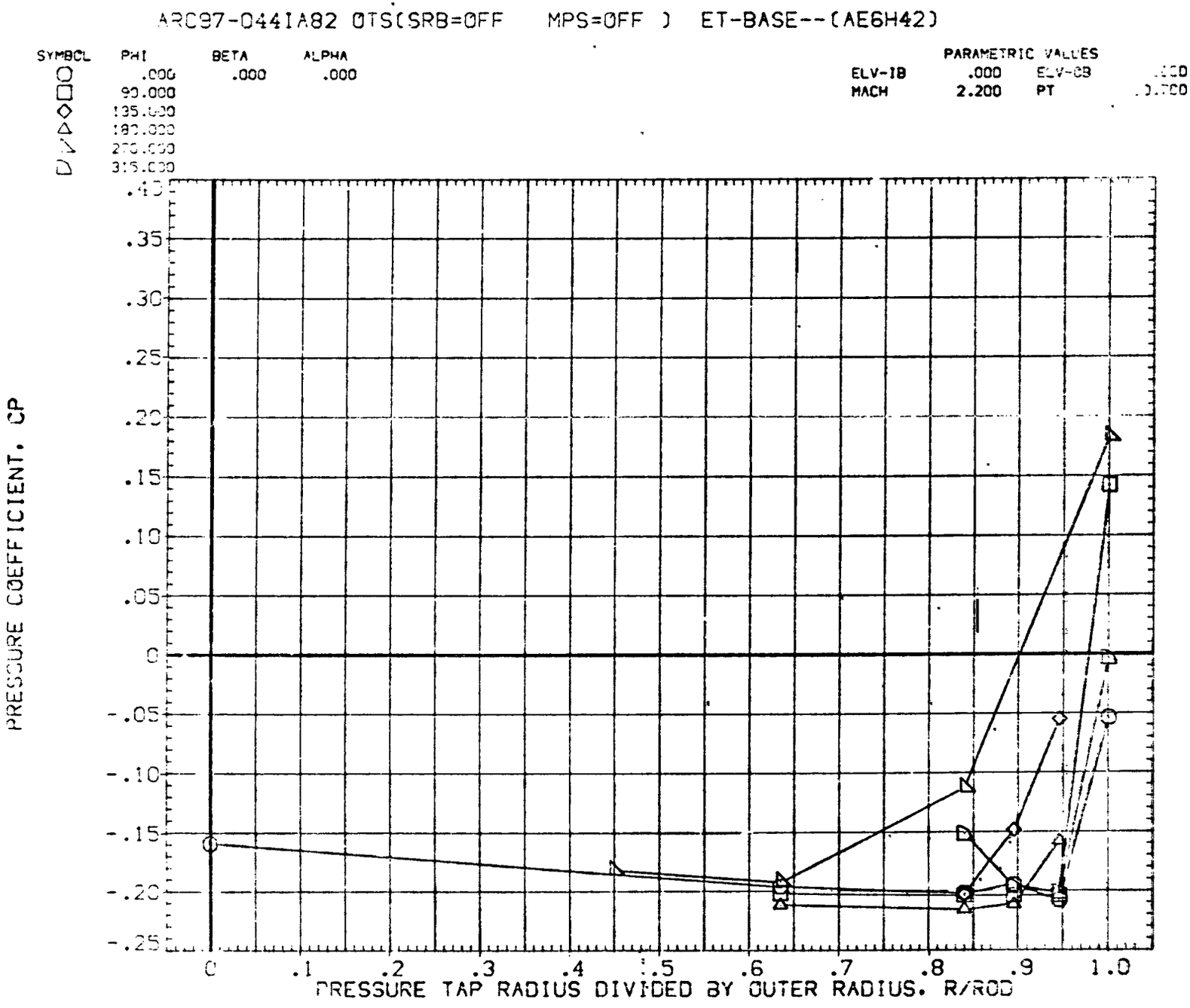


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

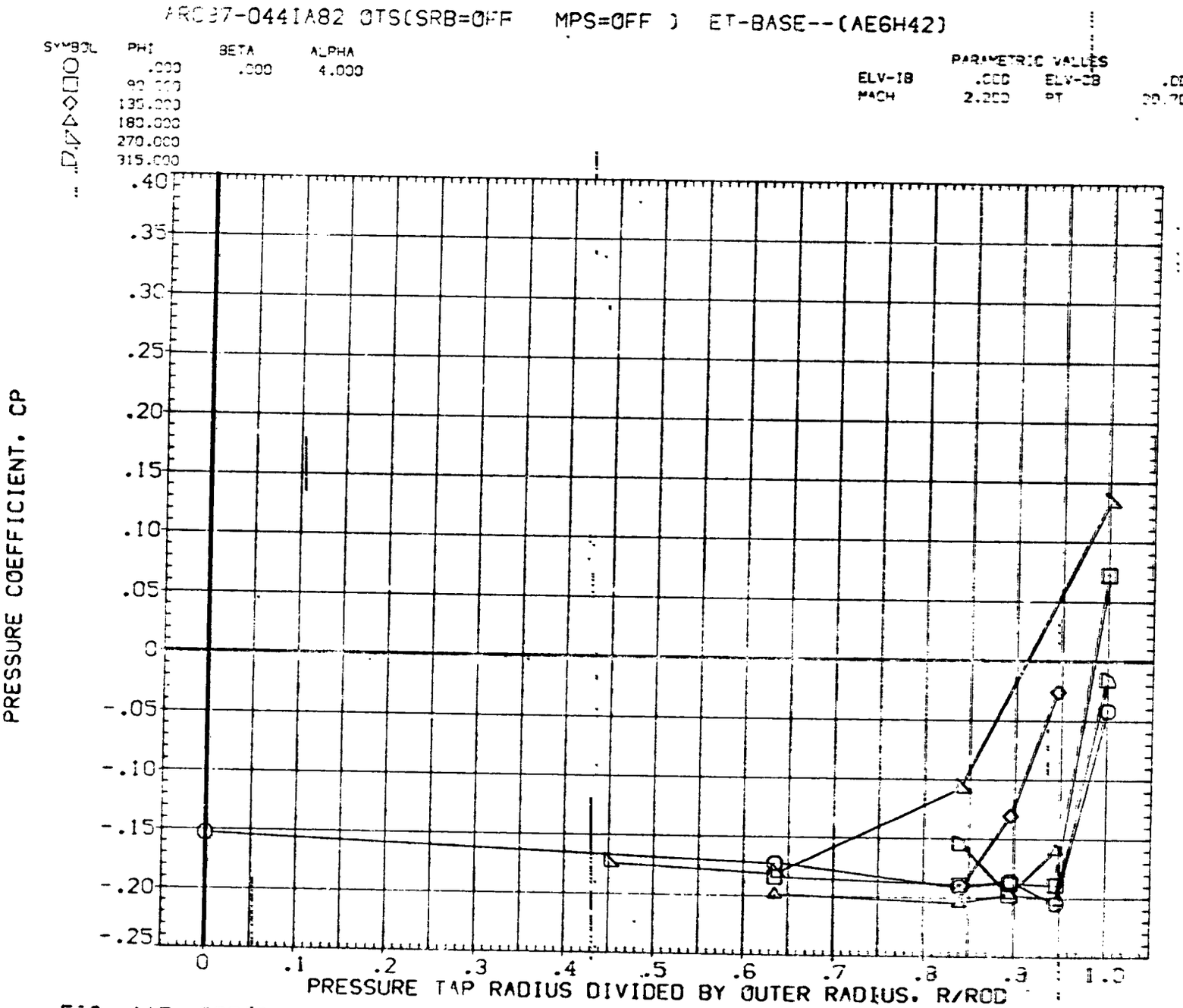


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

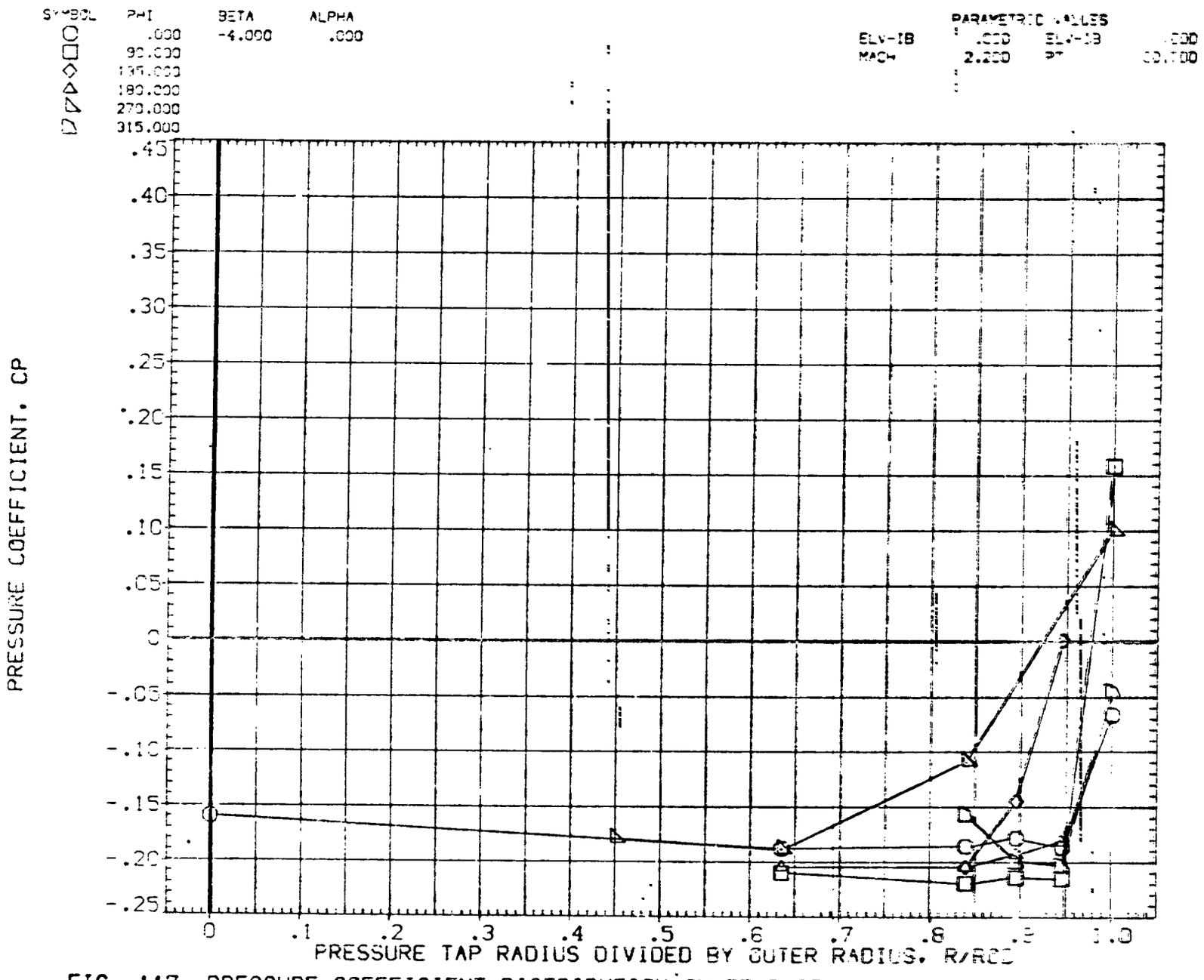


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

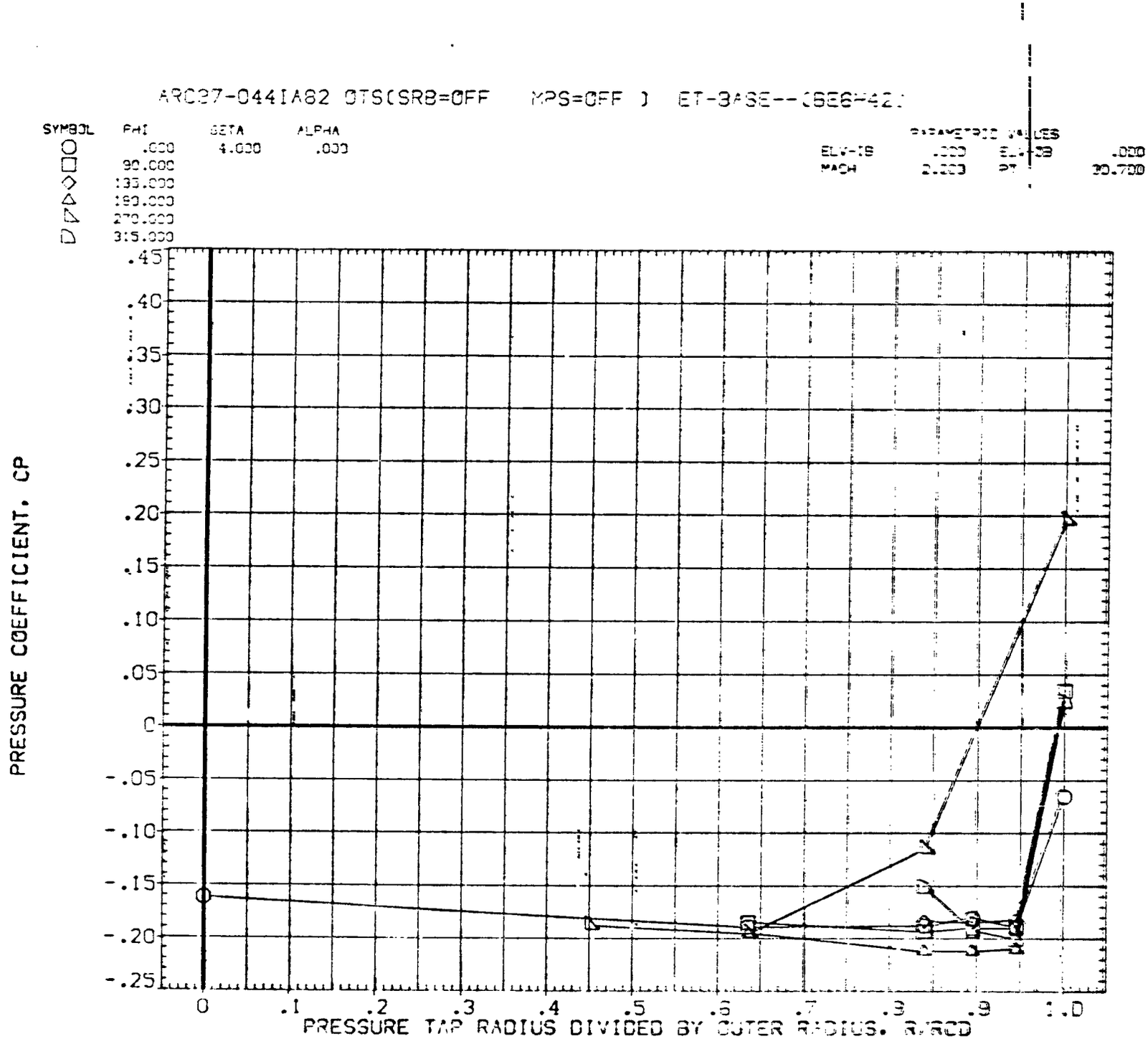


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

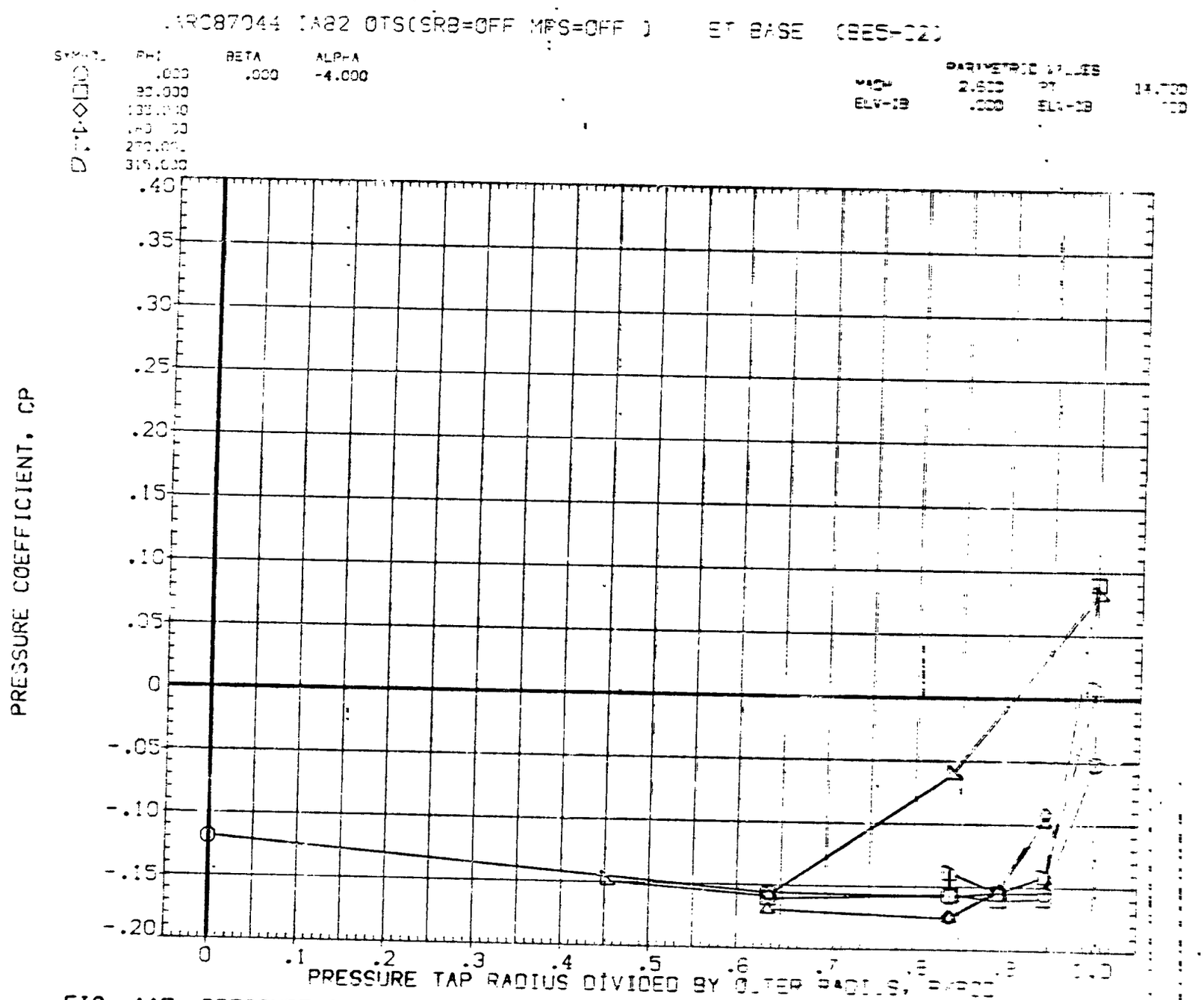


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

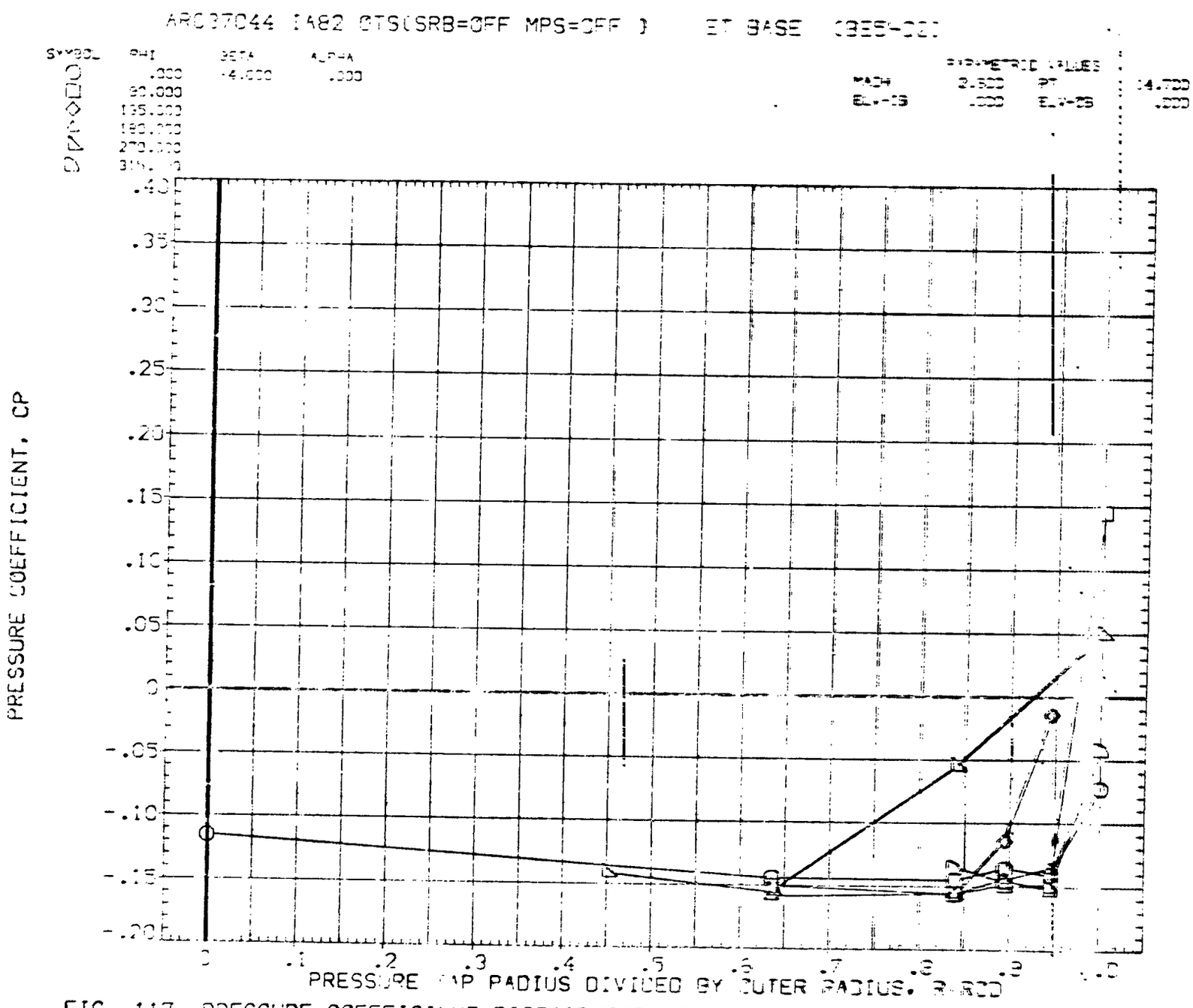


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

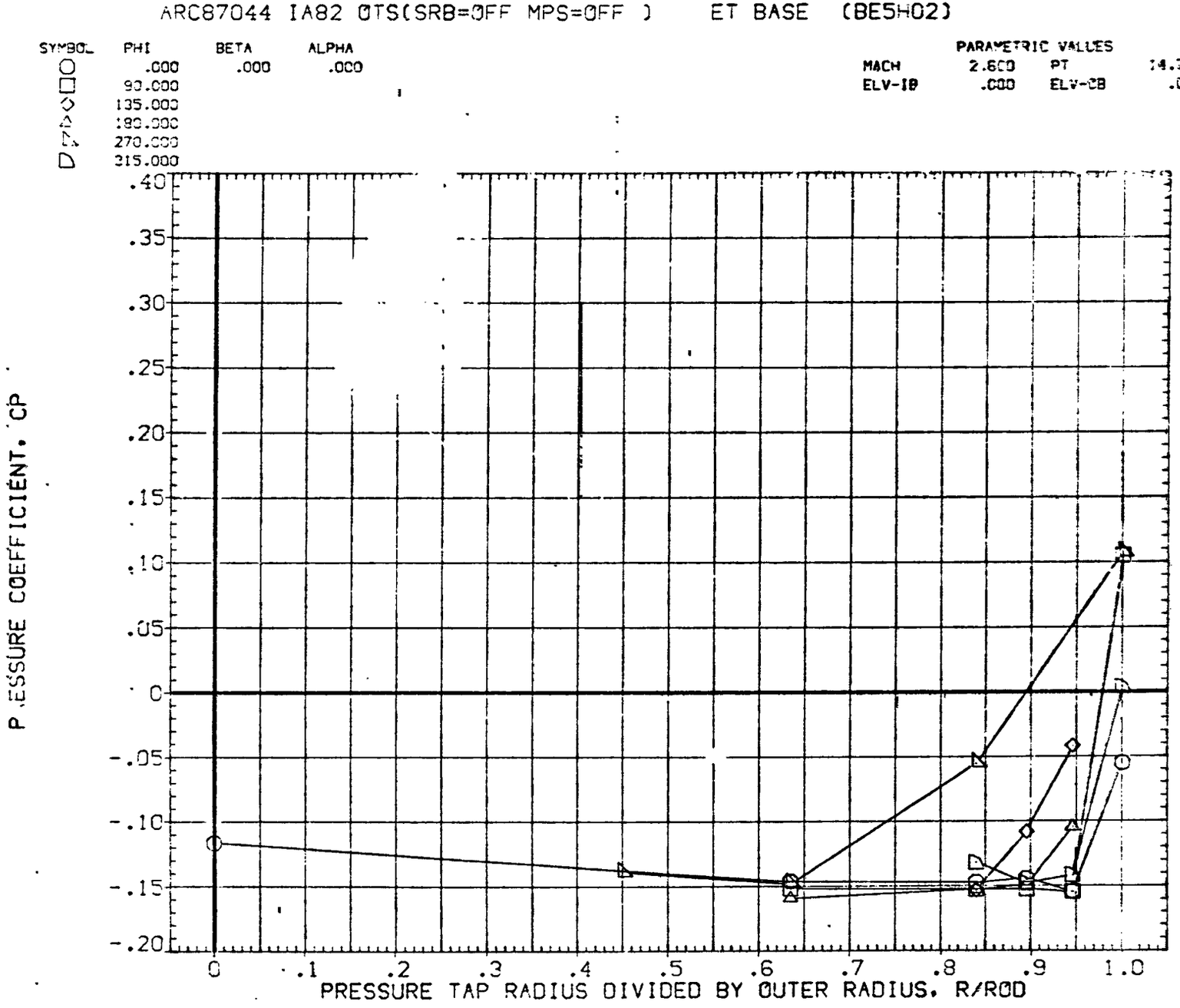


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

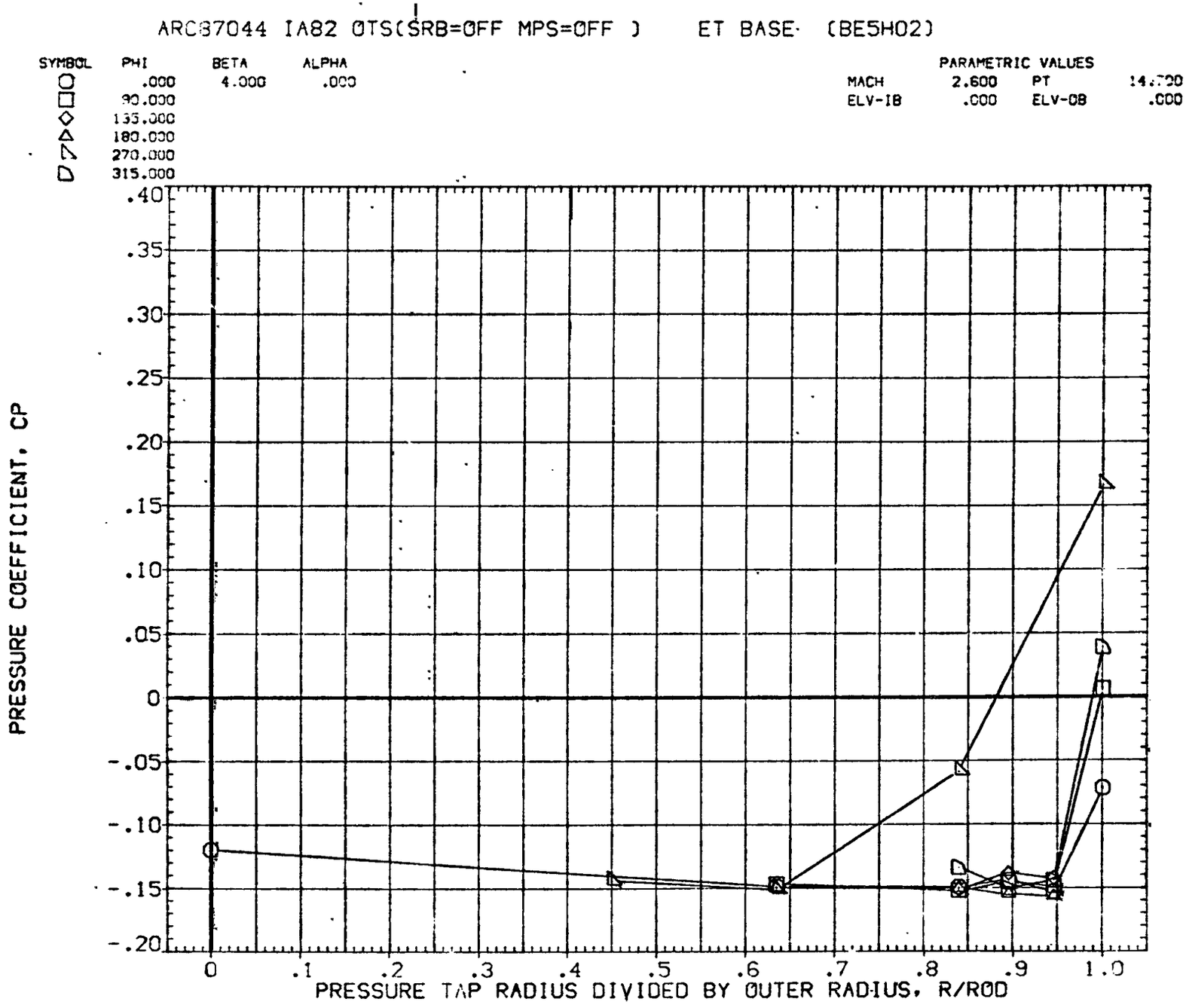


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

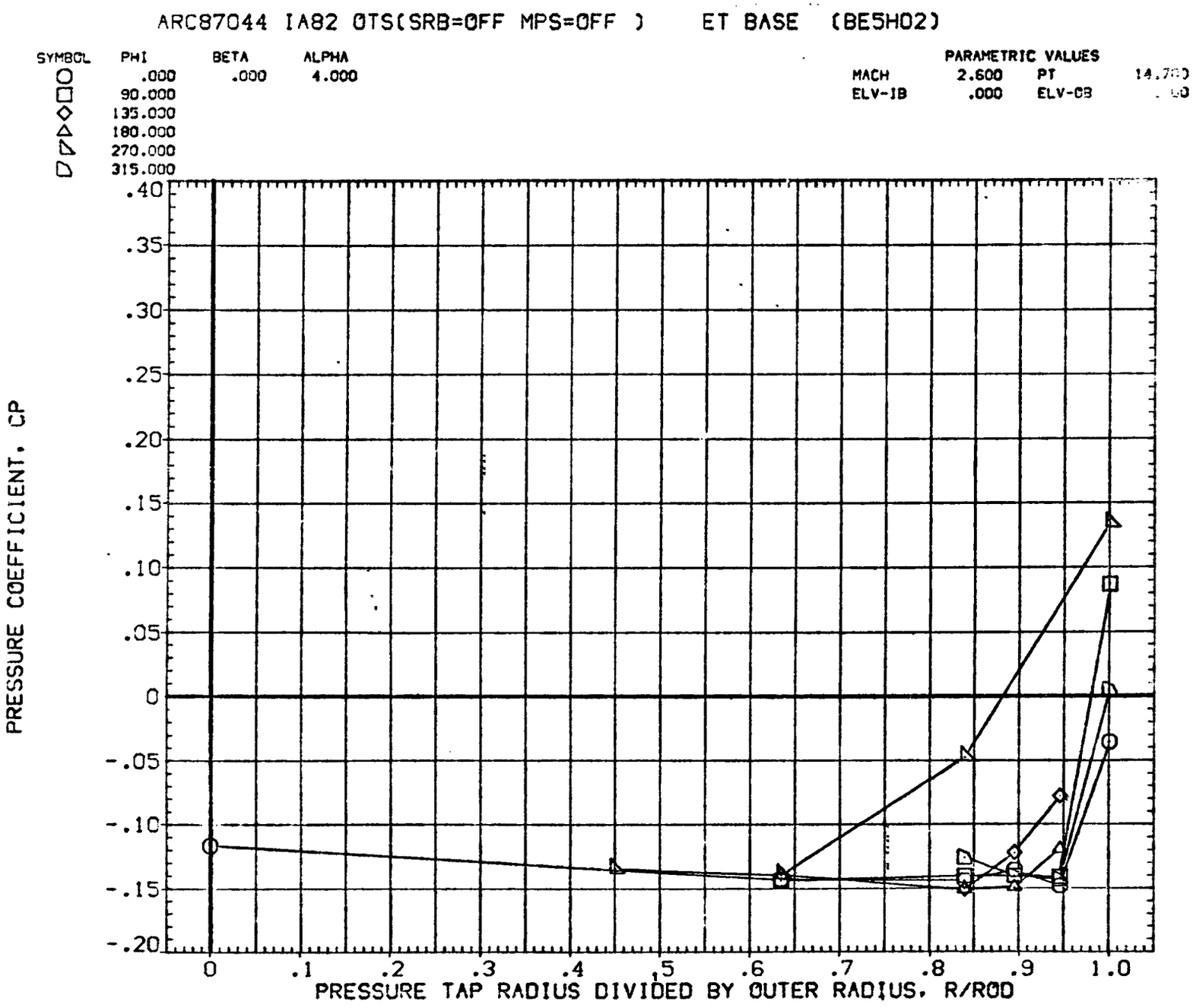


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

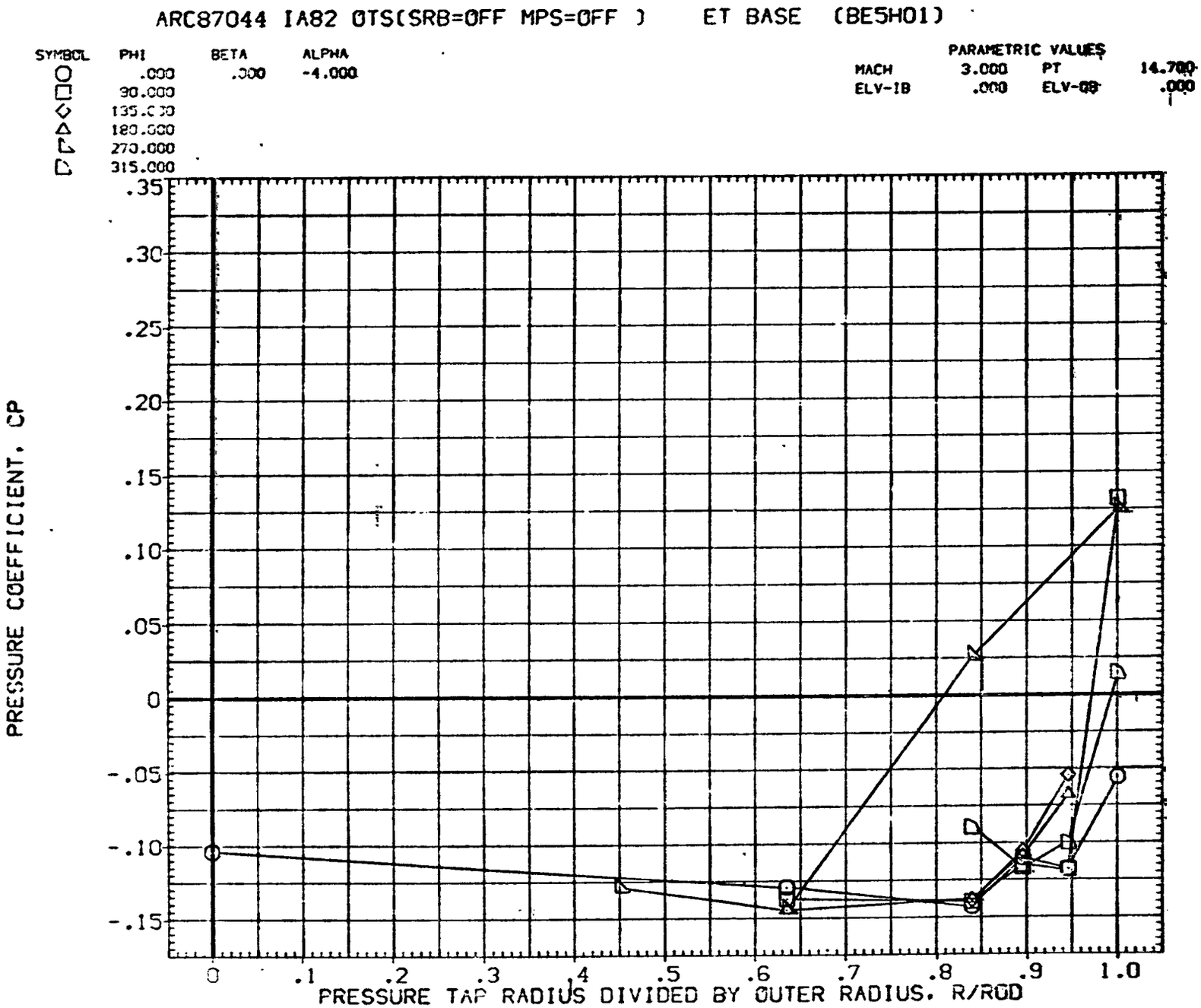


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

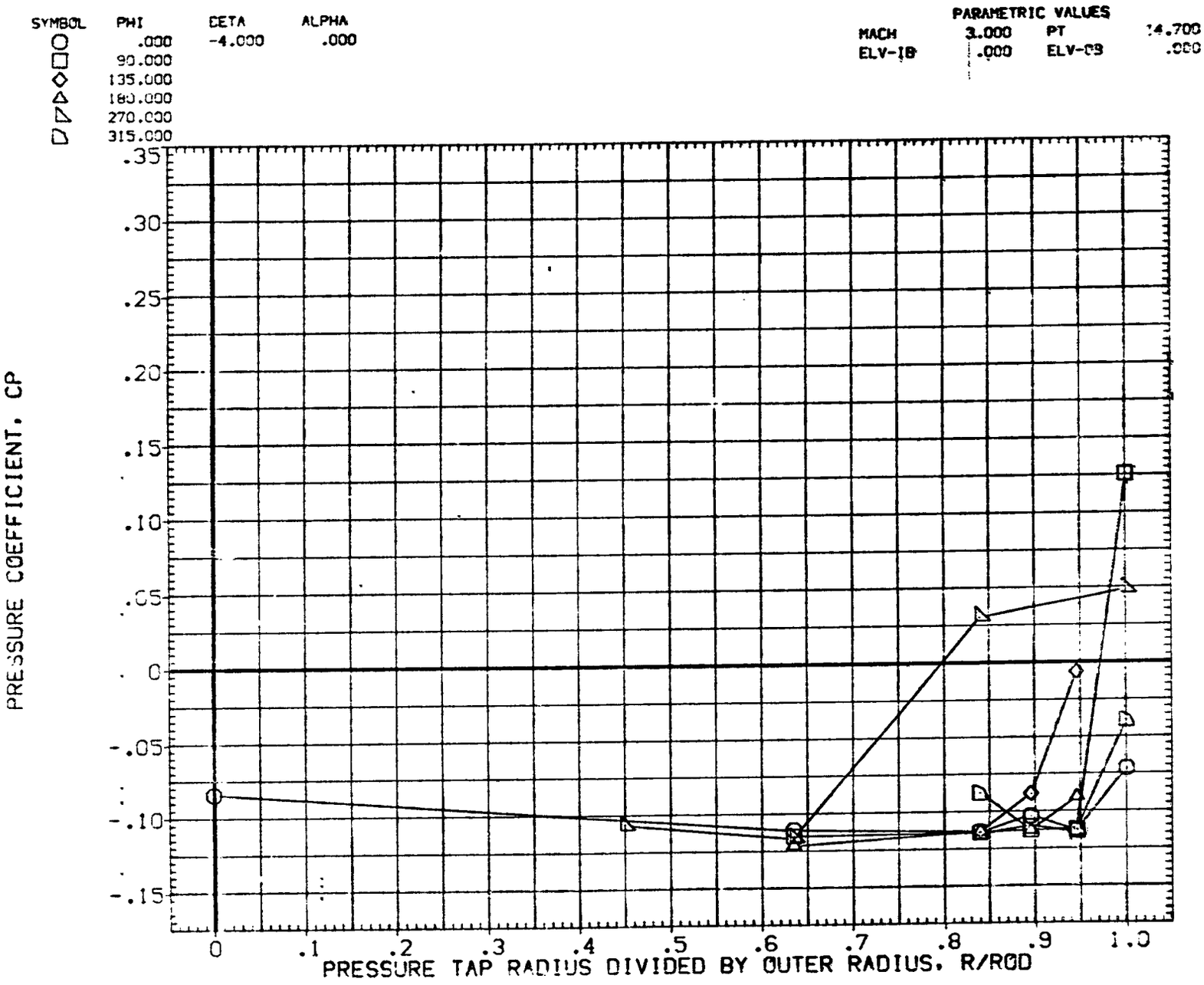


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

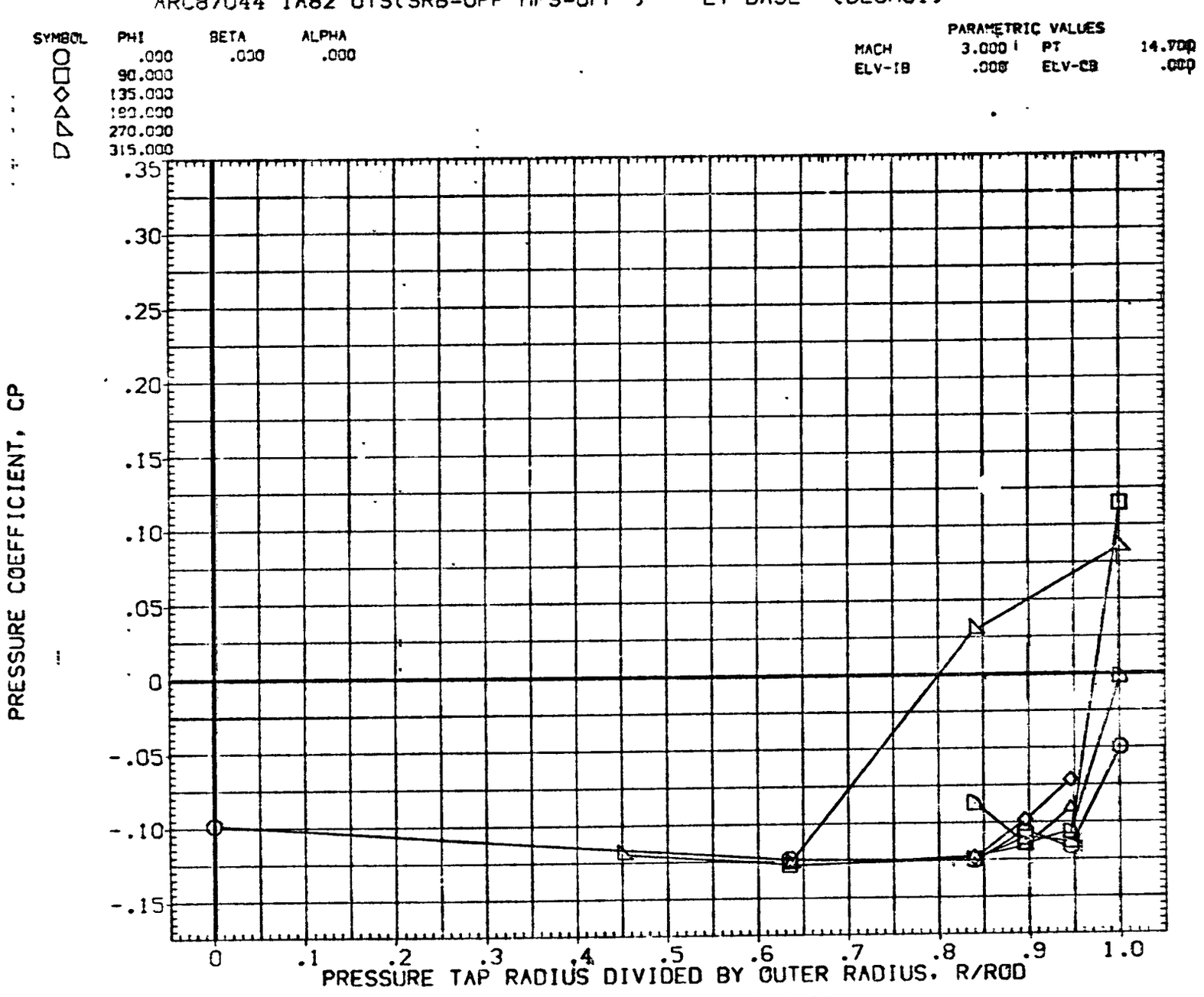


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

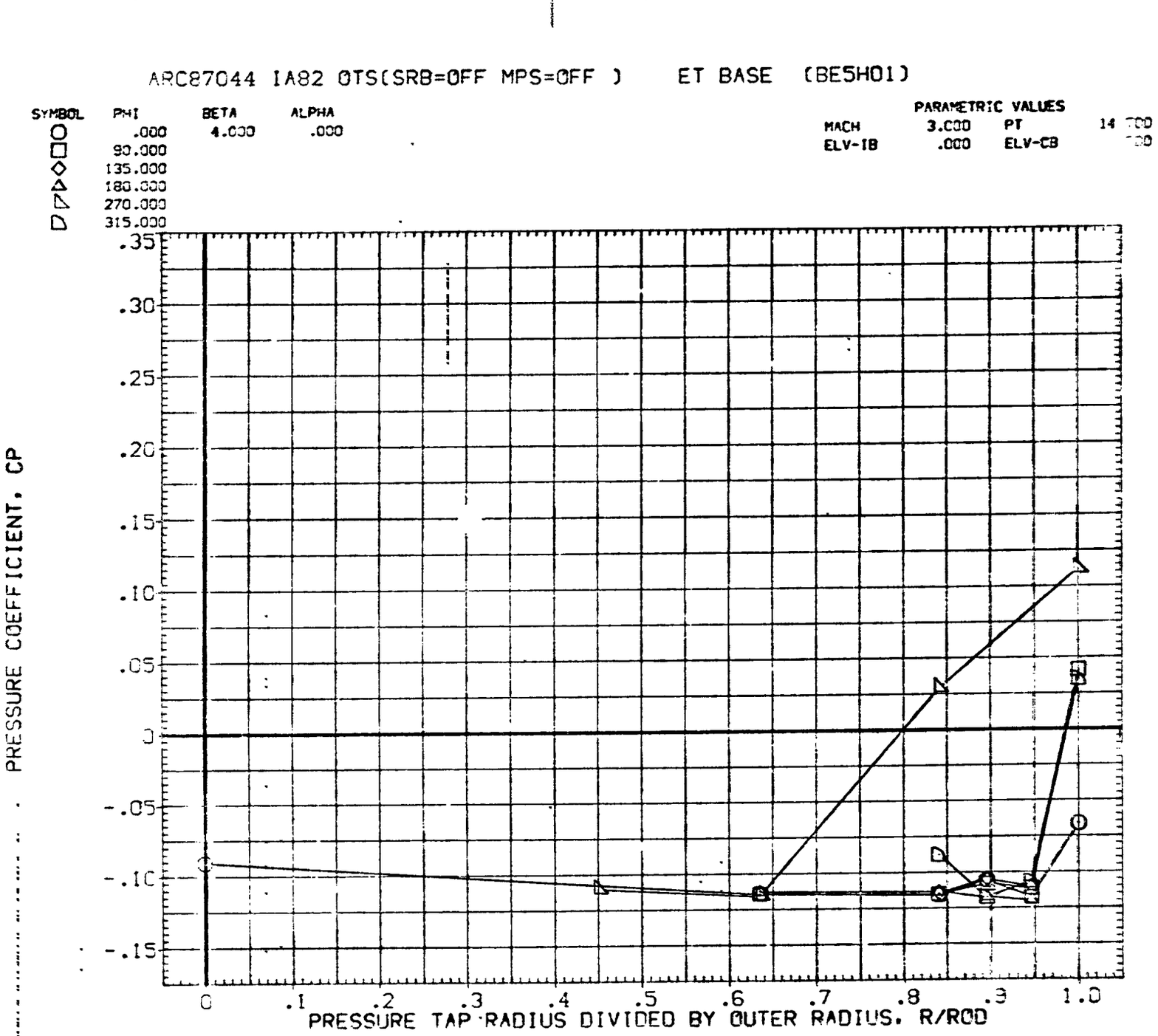


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

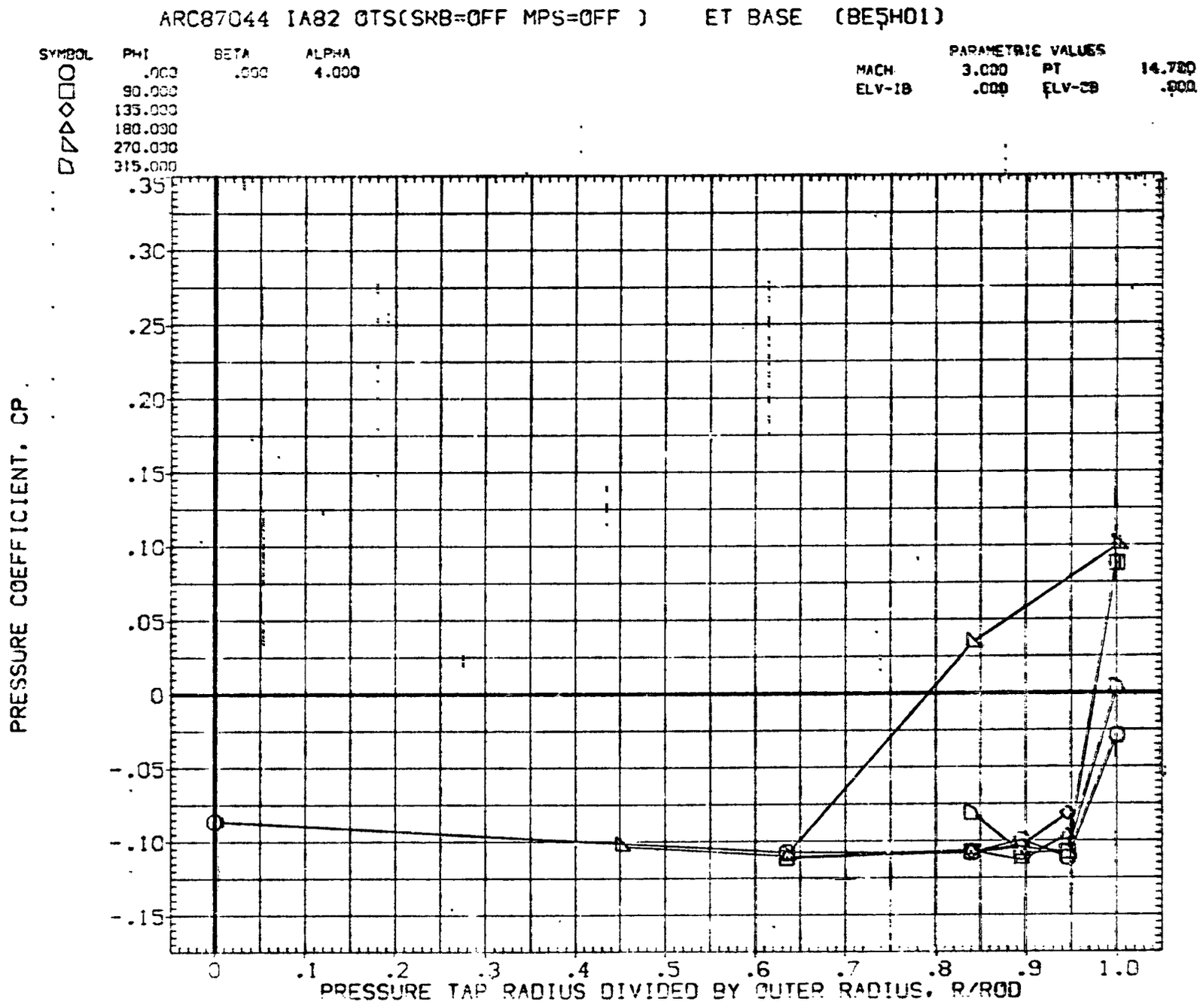


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

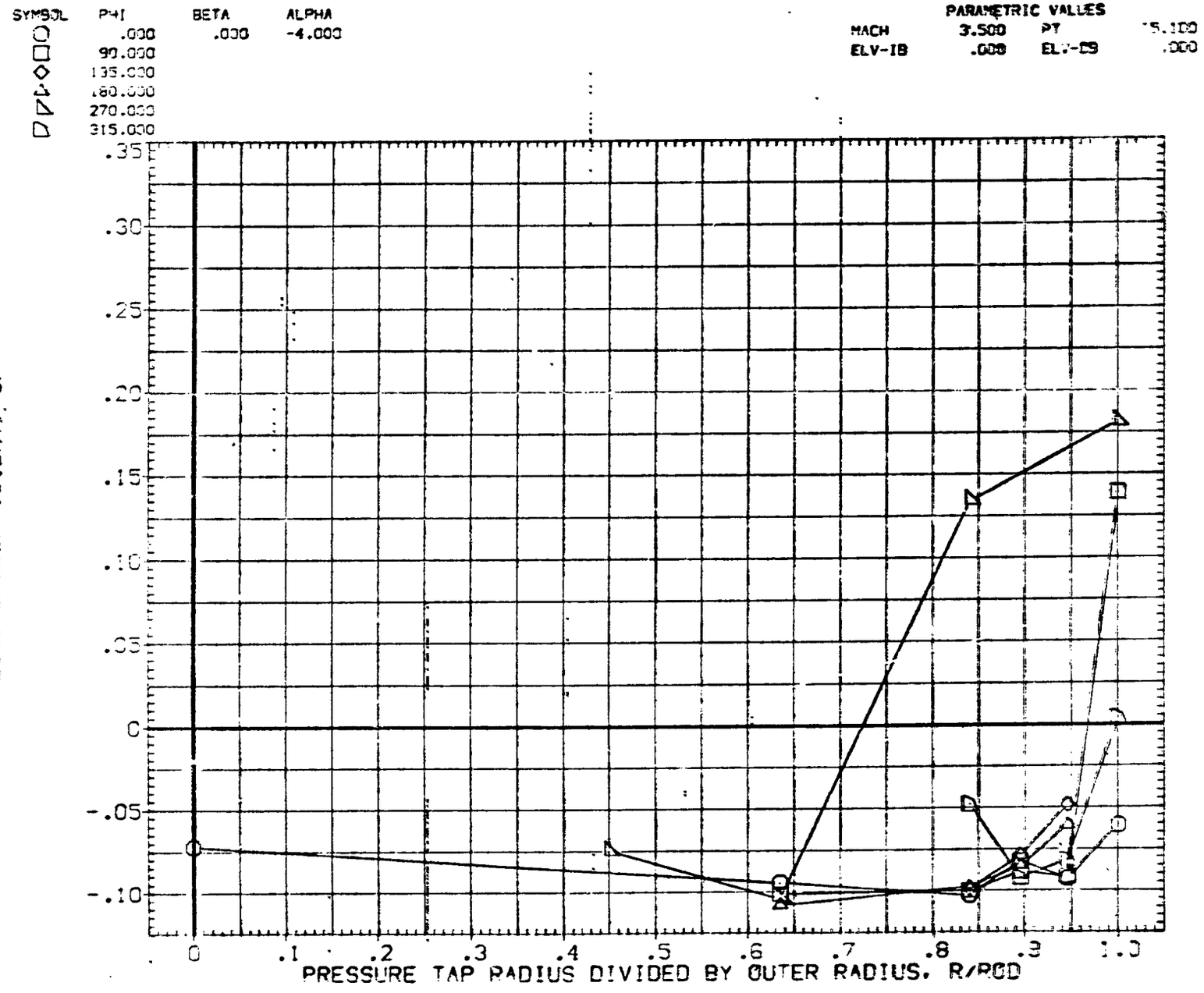


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

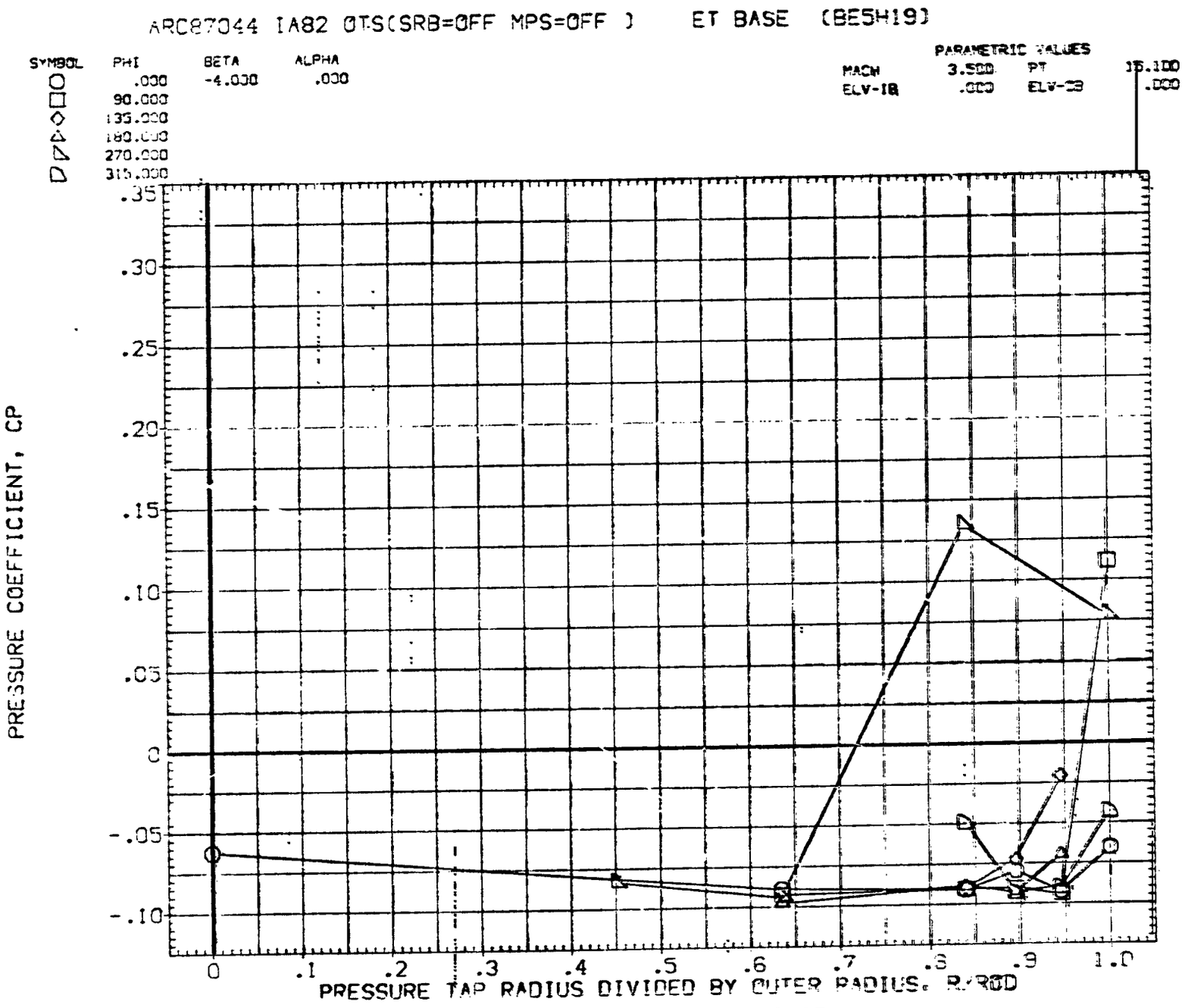


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

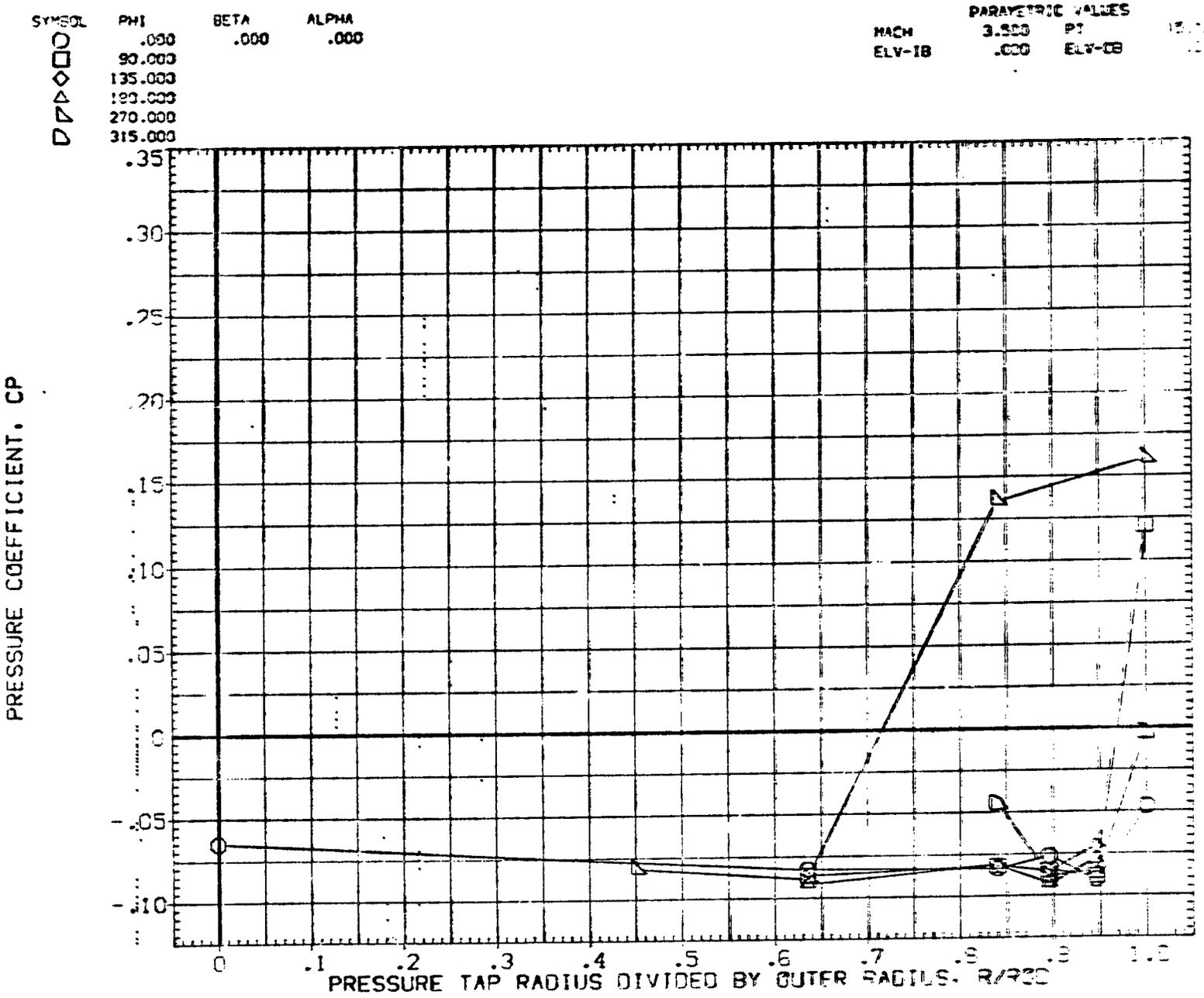


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

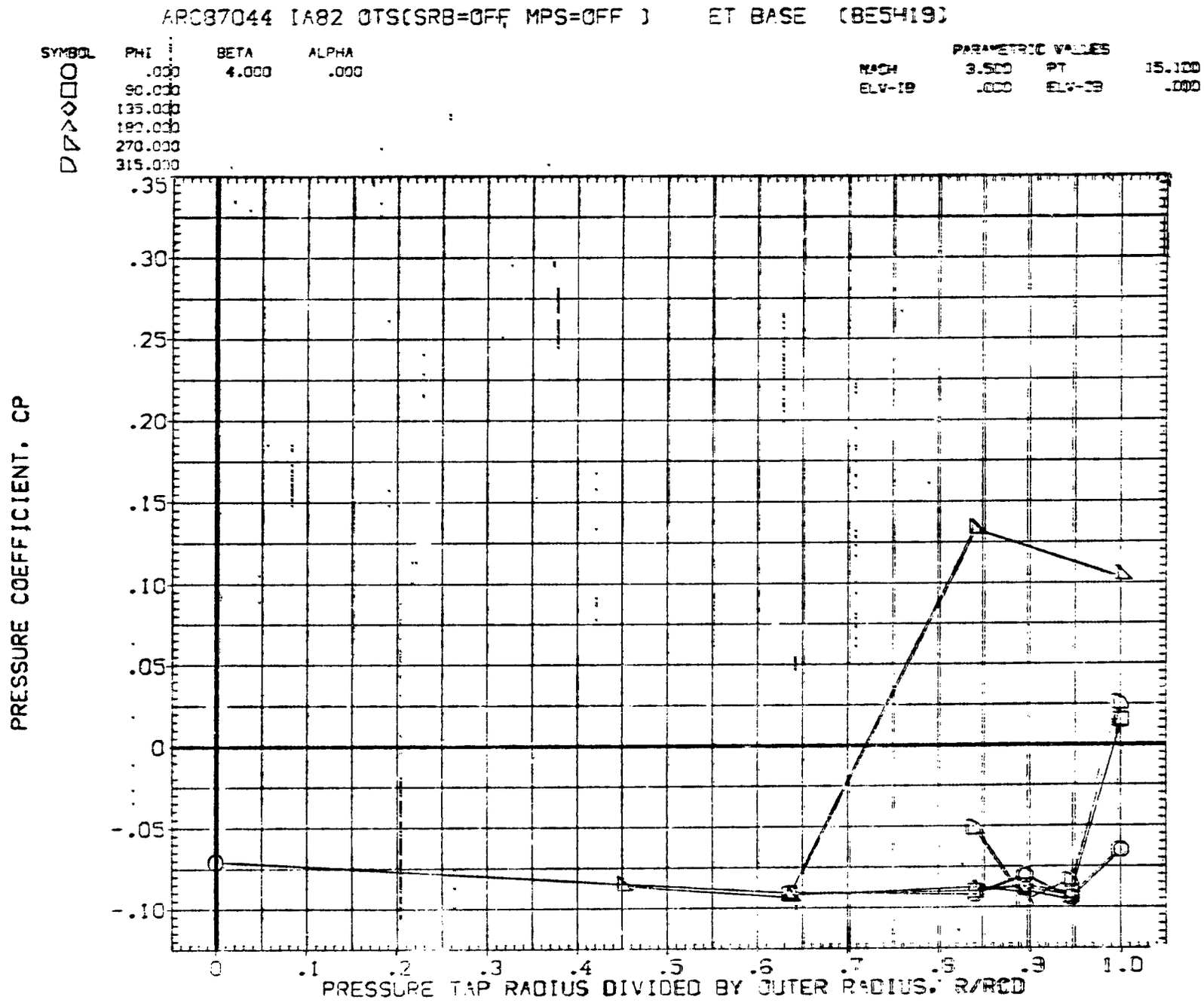


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET BASE

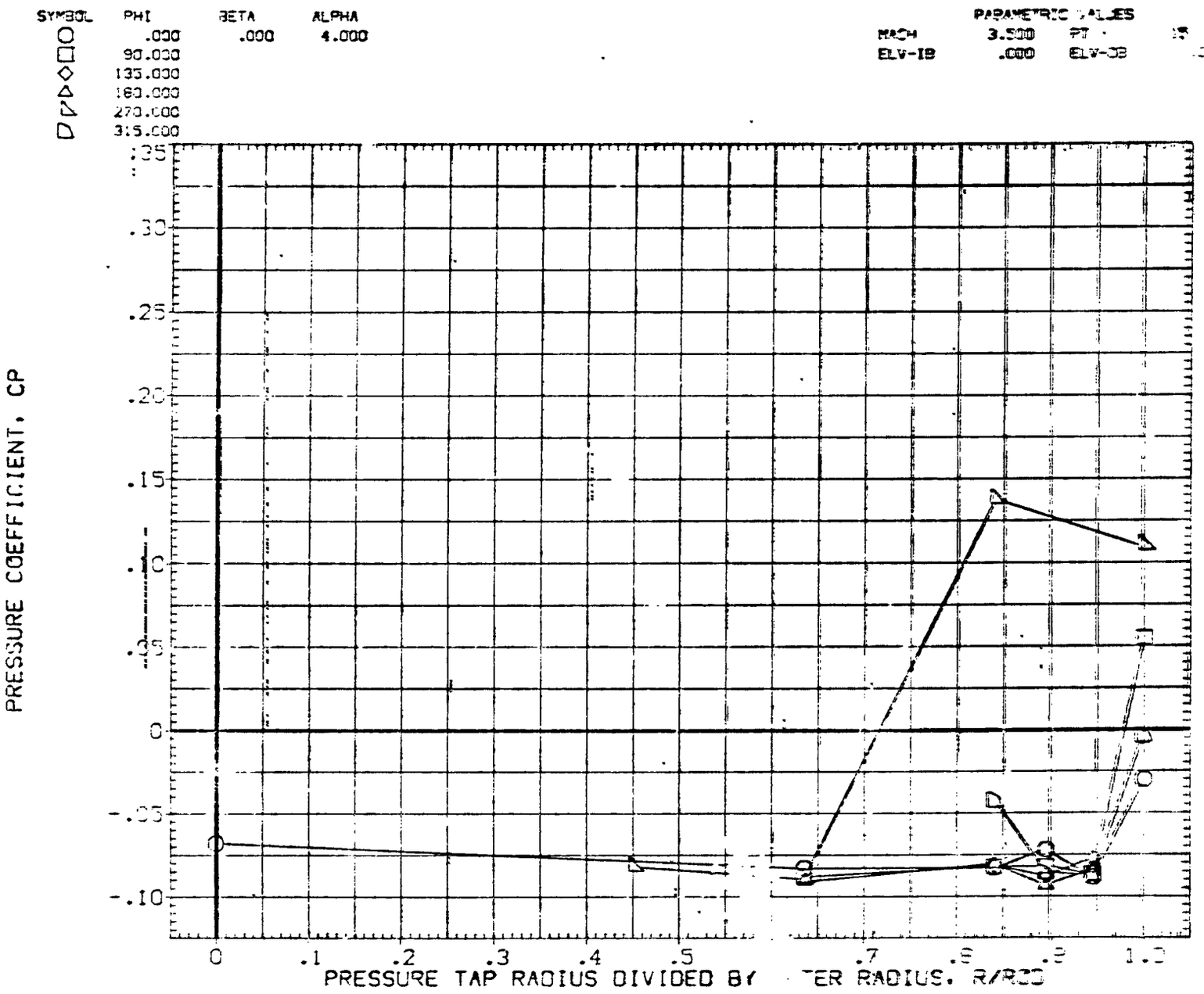


FIG. 117 PRESSURE COEFFICIENT DISTRIBUTION ON ET

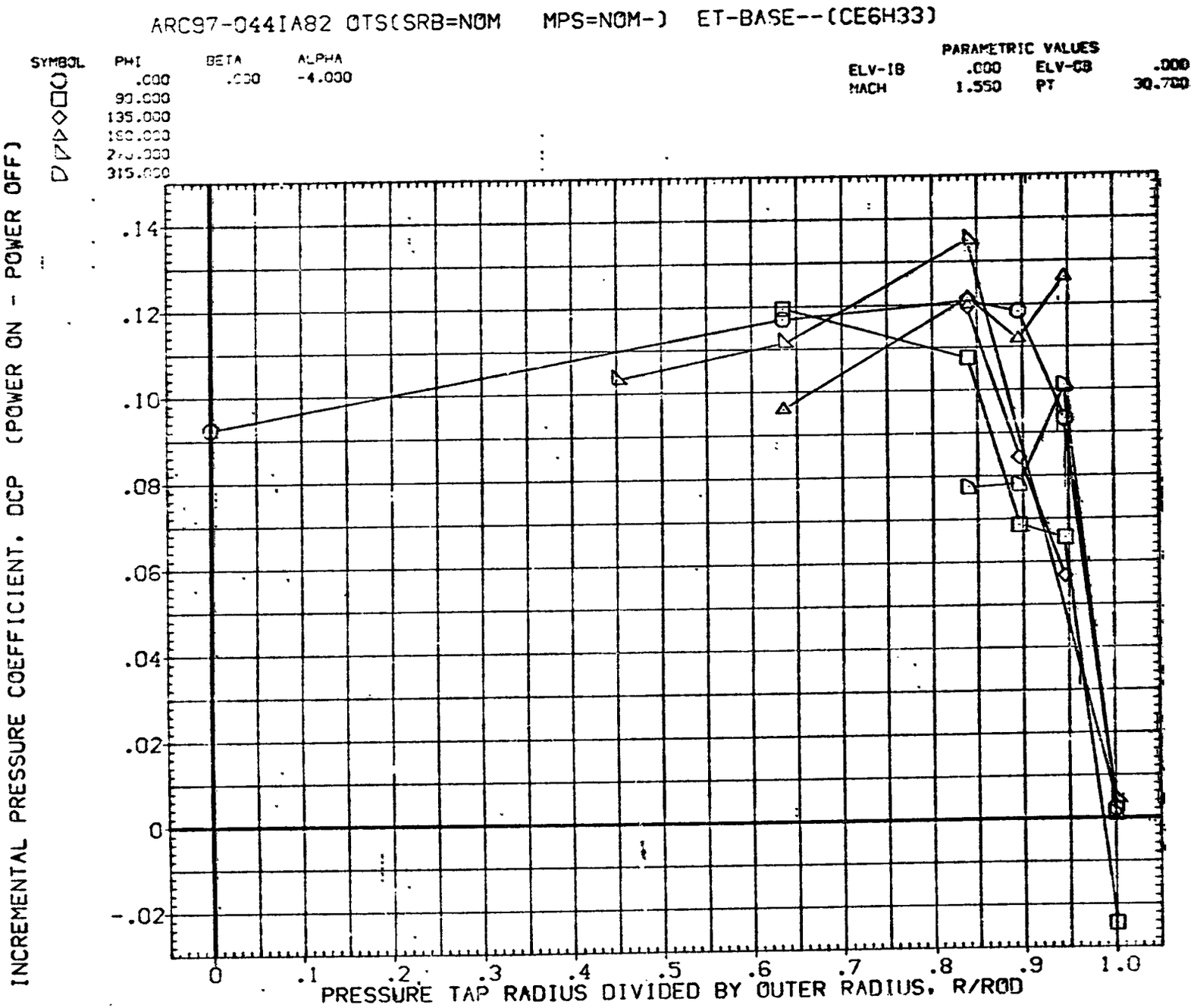


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

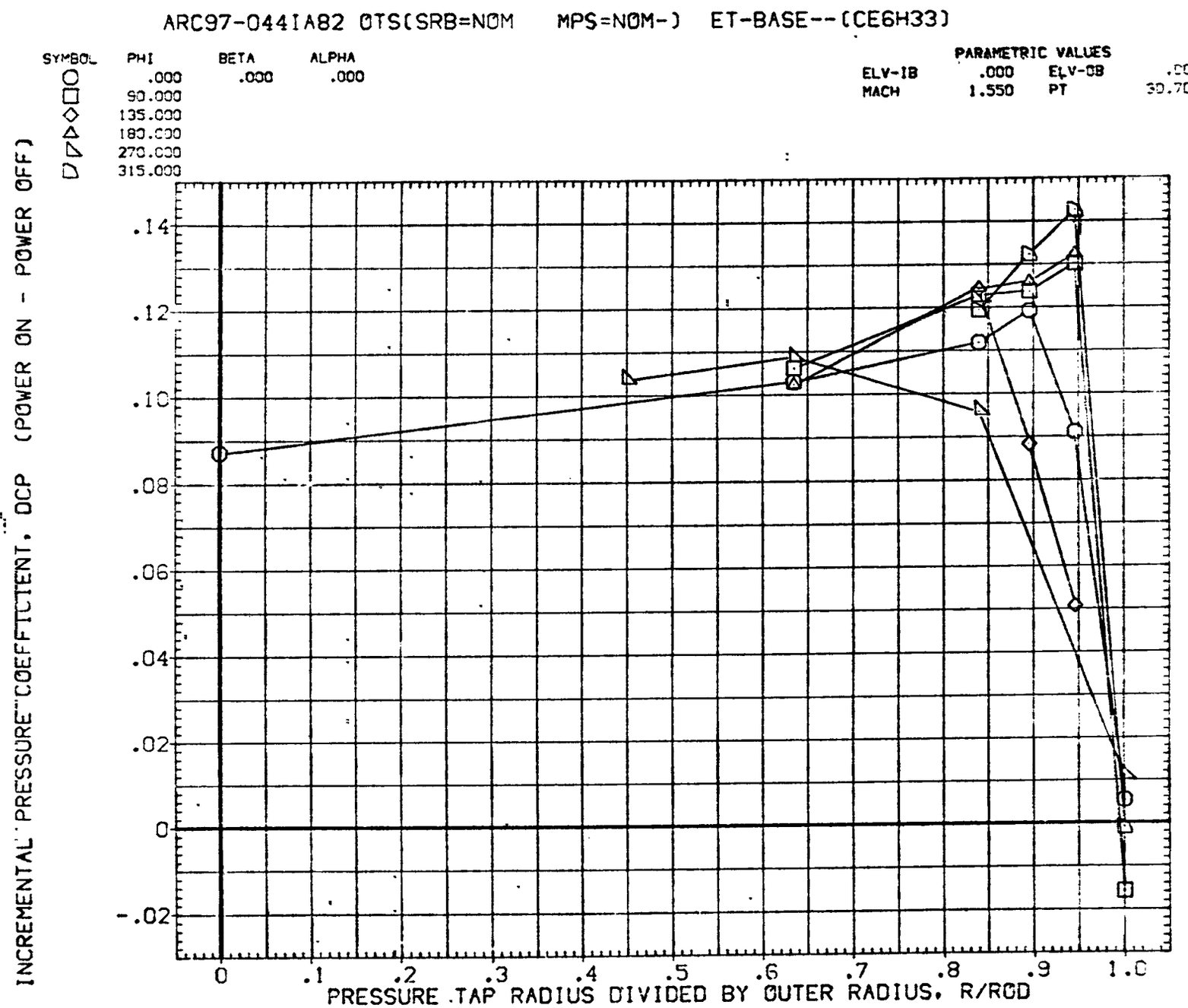


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

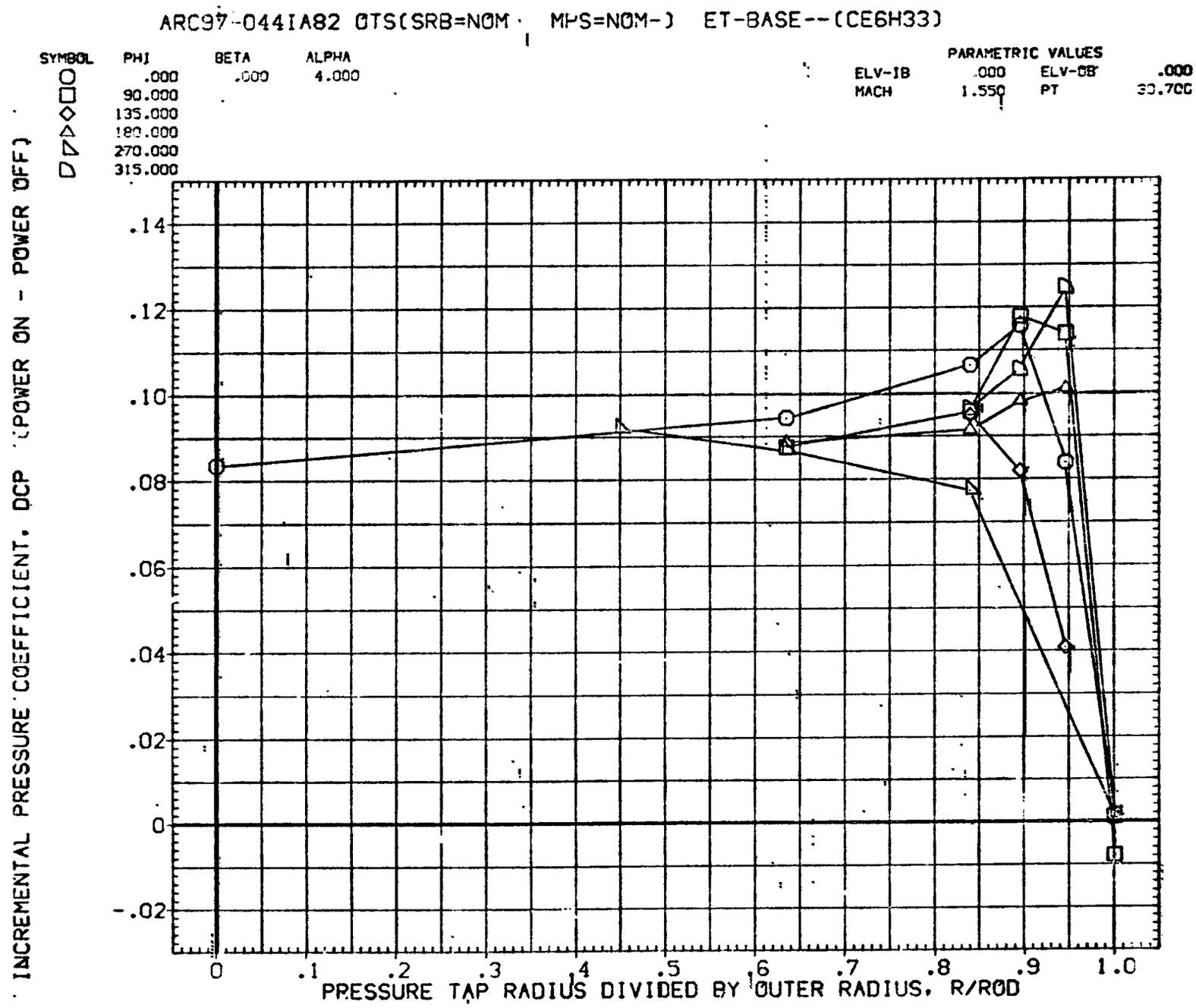


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

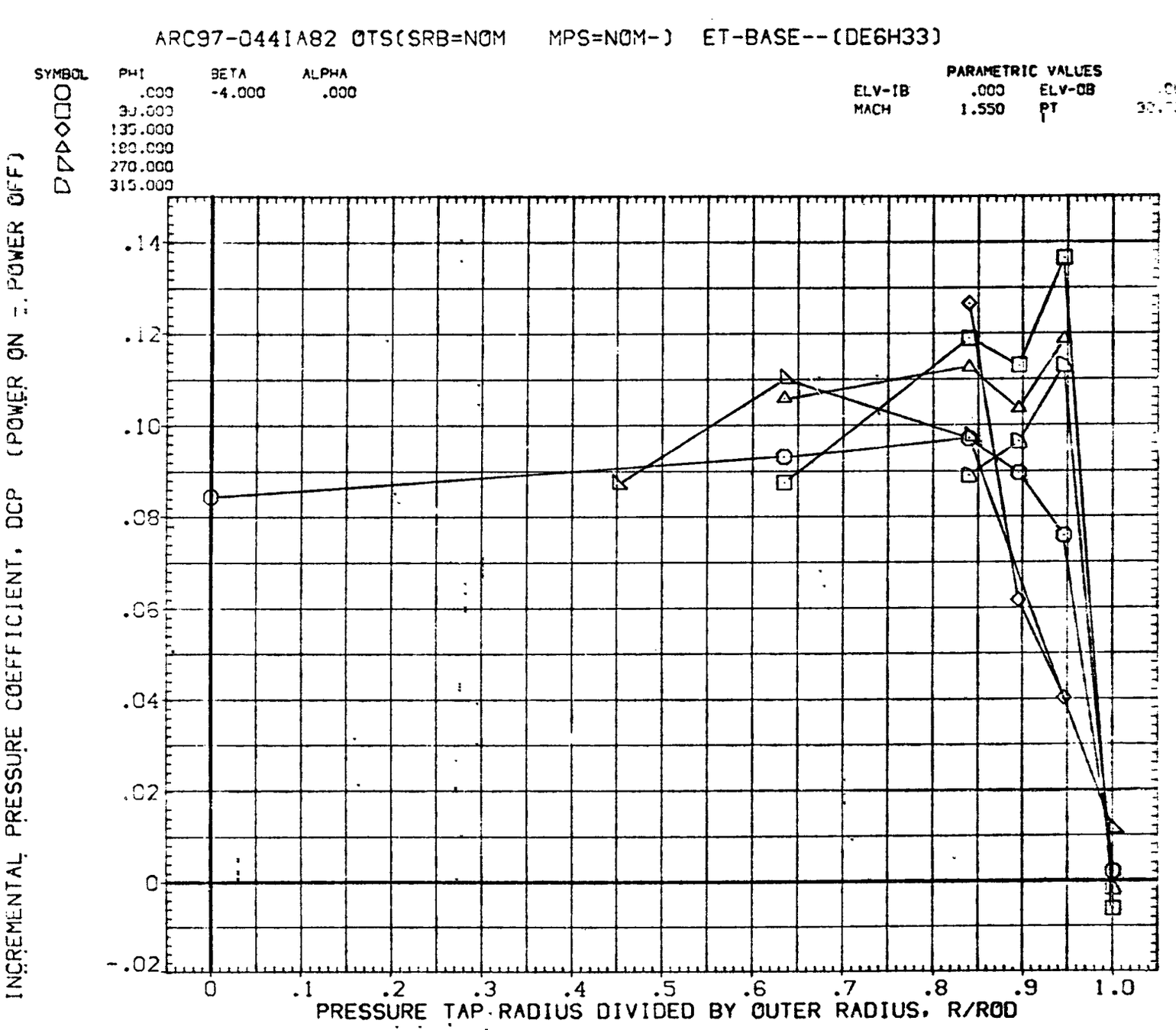


FIG. 118 - INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

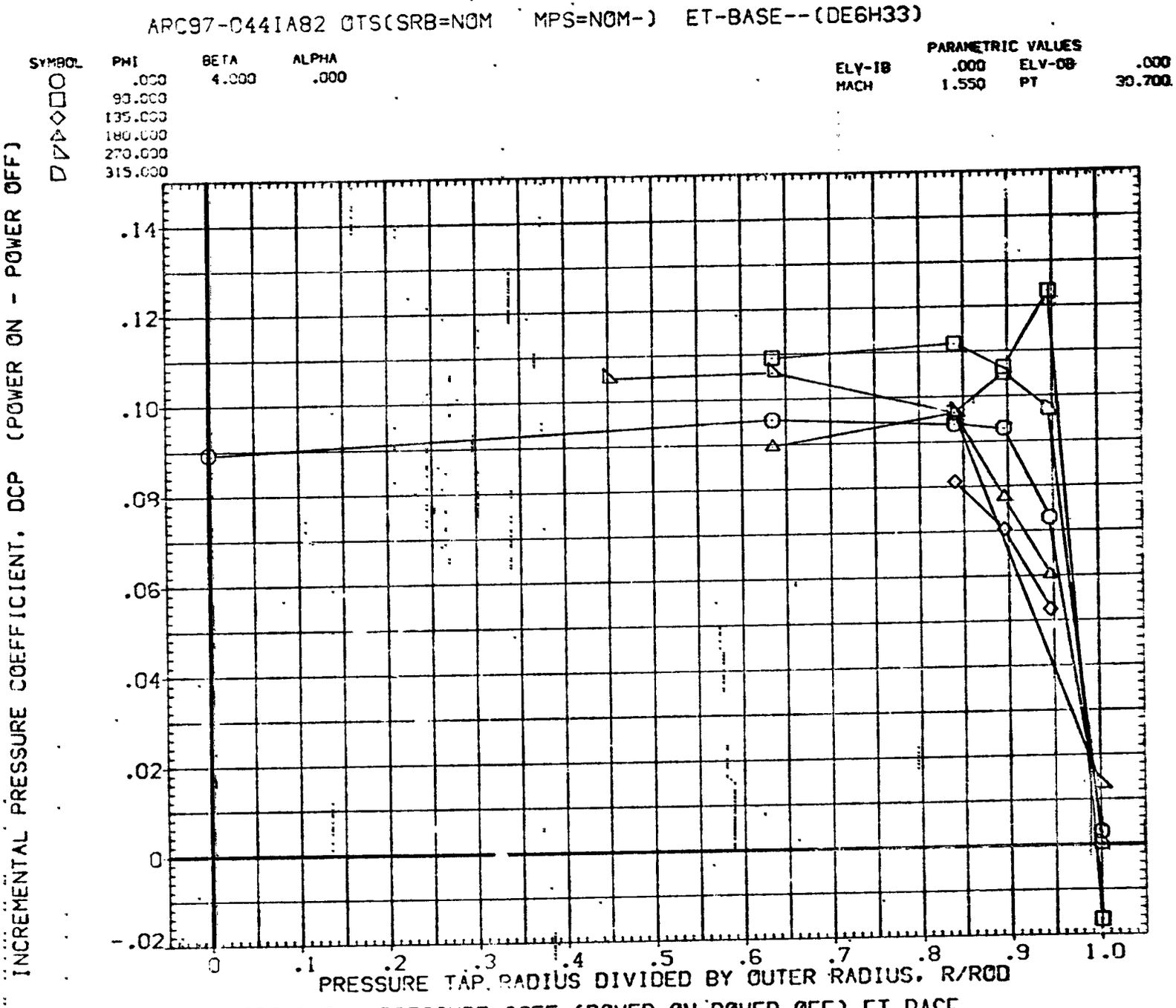


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

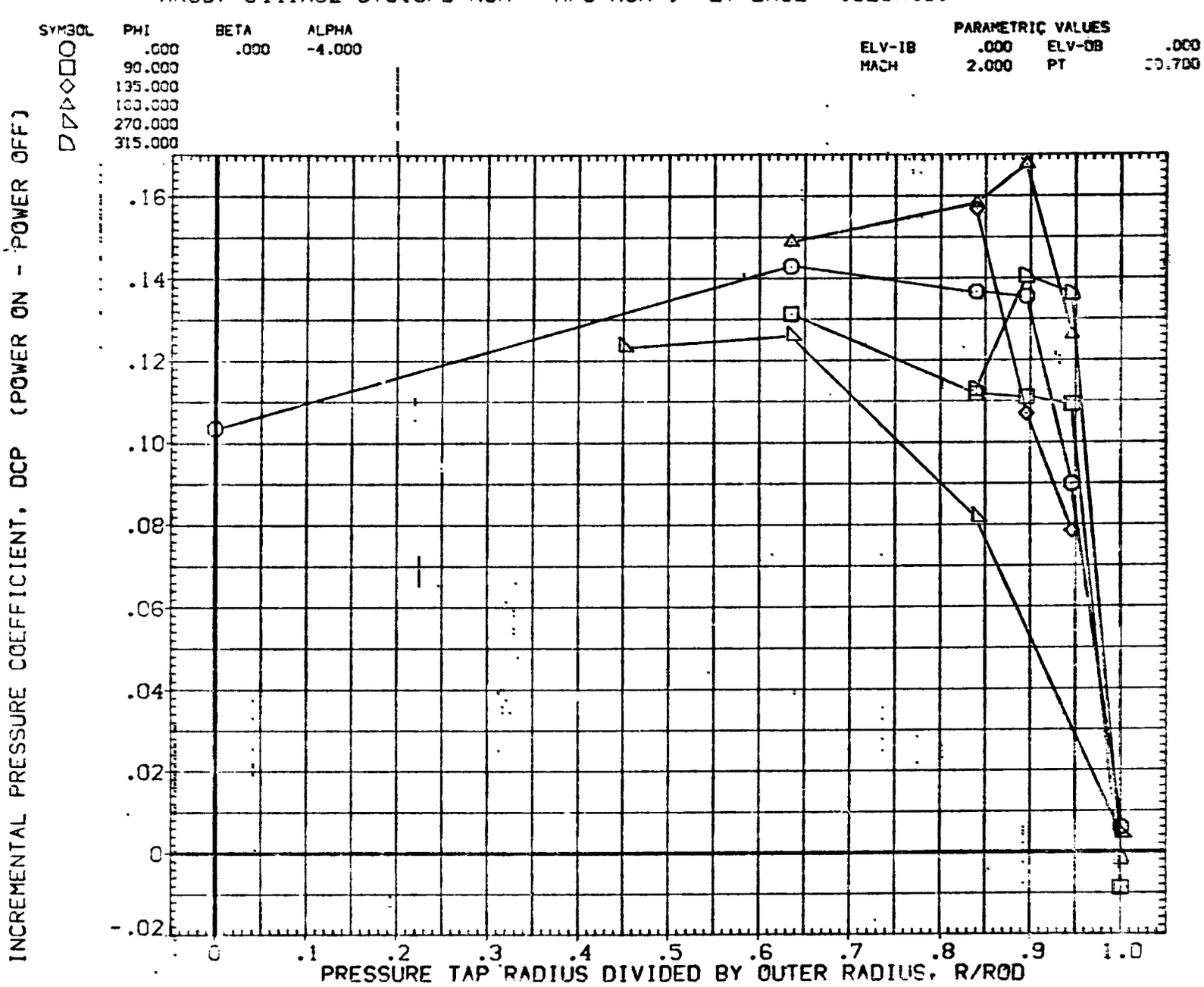


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

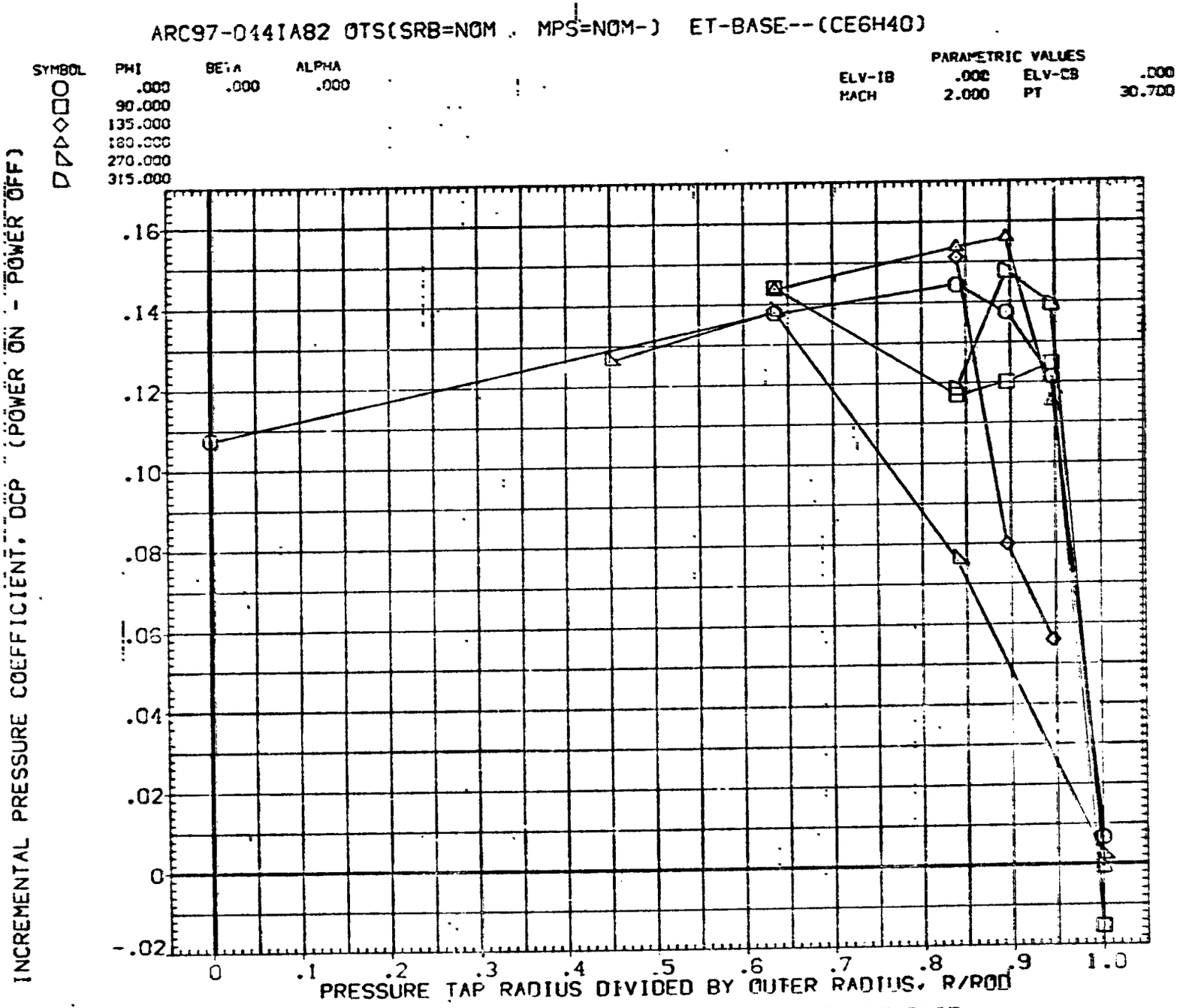


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

ARC97-0441A82 OTS(SRB=NOM MFS=NOM-) ET-BASE--(CE6H40)

SYMBOL	PHI	BETA	ALPHA
○	.000	.000	4.000
□	90.000		
◇	135.000		
△	180.000		
▷	270.000		
▽	315.000		

PARAMETRIC VALUES

ELV-IB	.000	ELV-OB	.000
MACH	2.000	PT	30.700

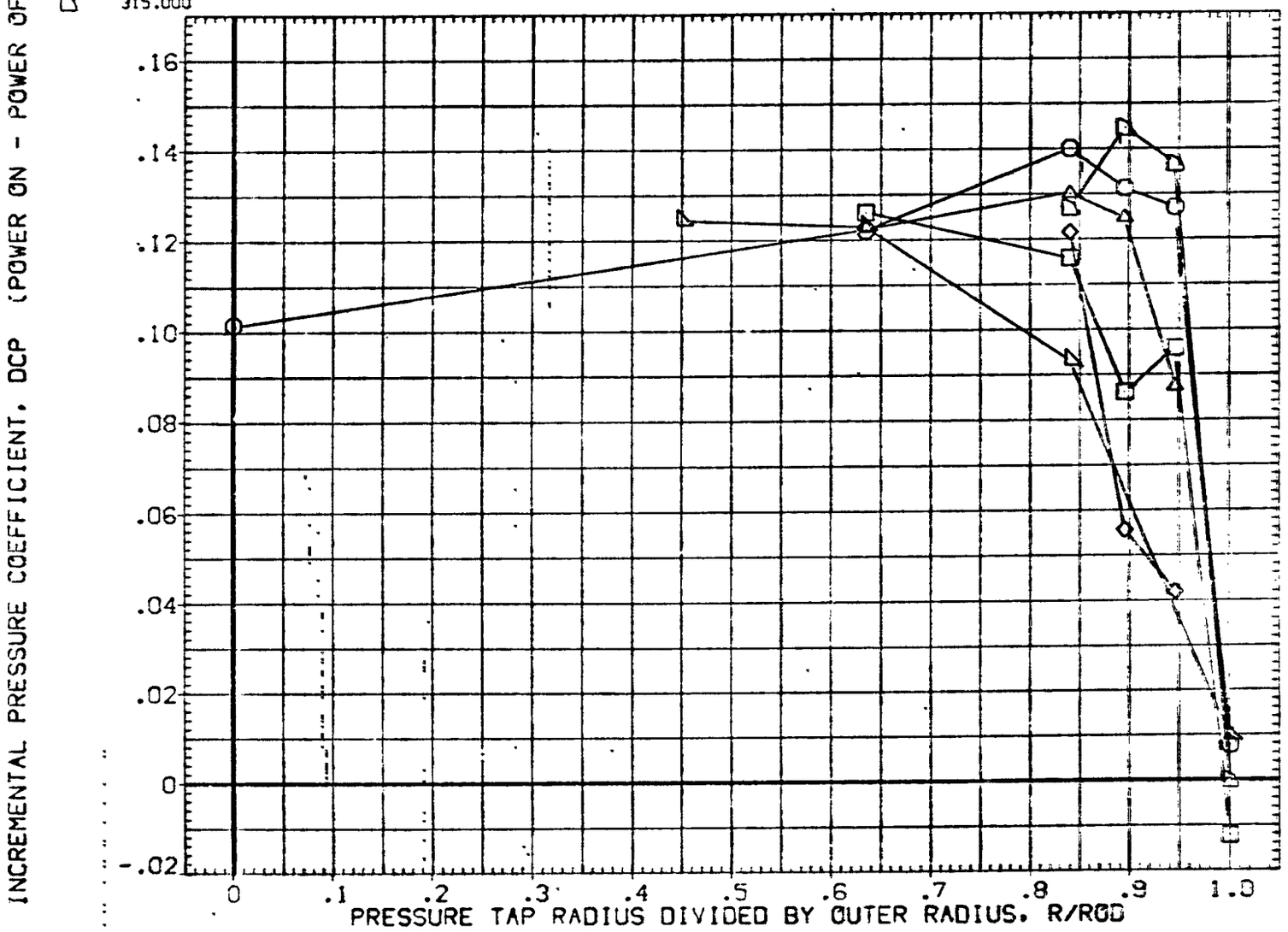


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

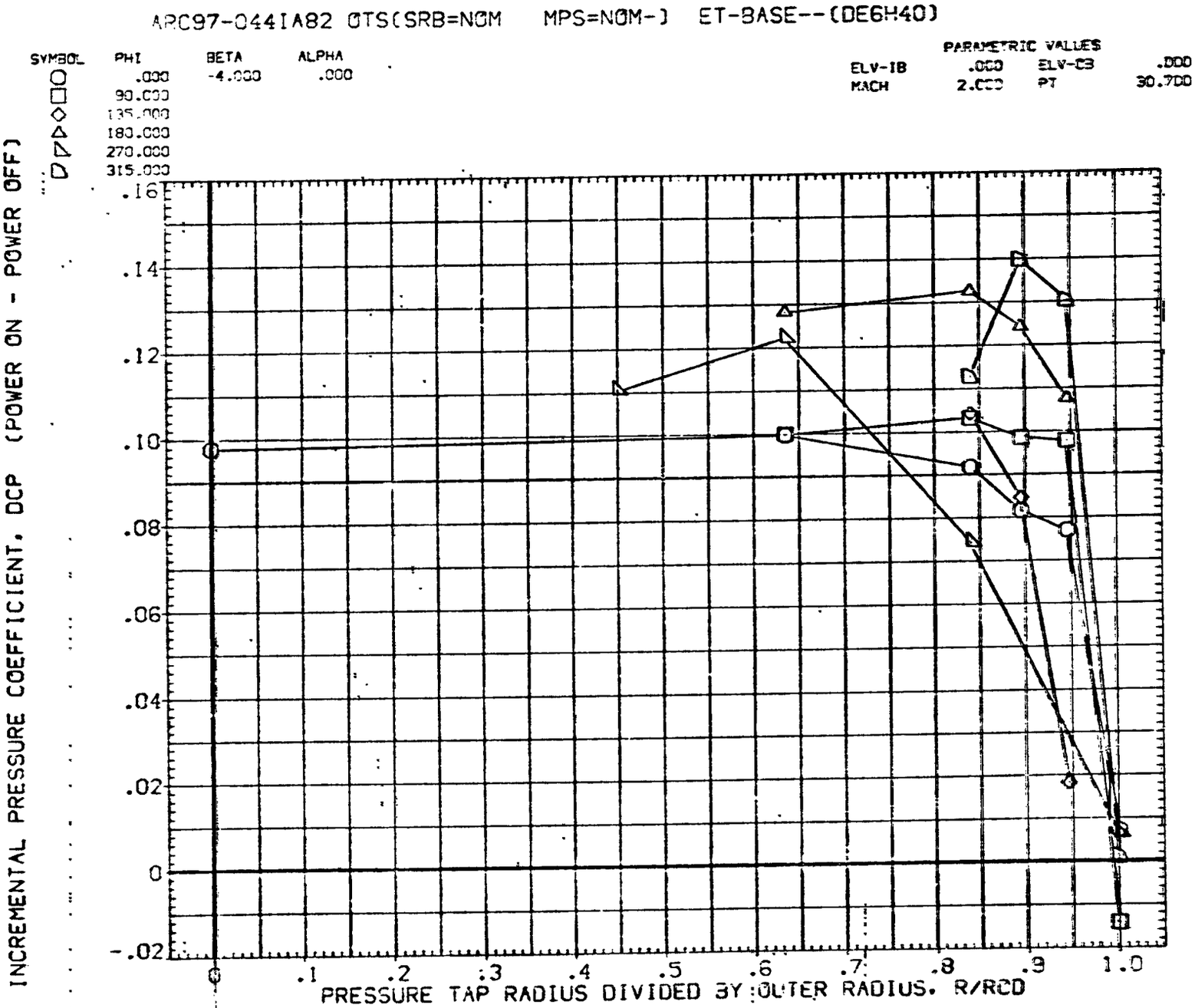


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

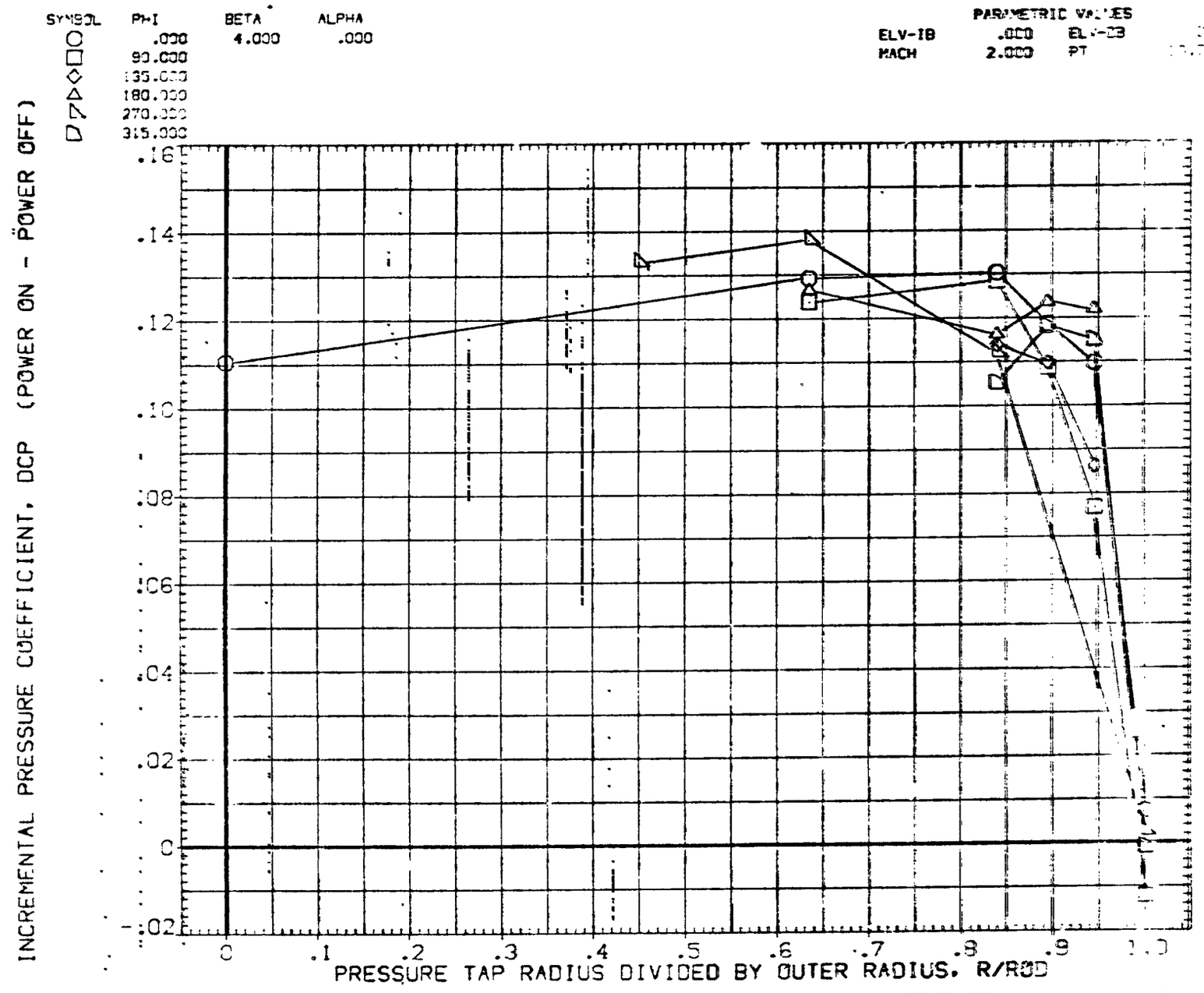


FIG. 118 INCREMENTAL PRESSURE COEF. (POWER ON-POWER OFF) ET BASE

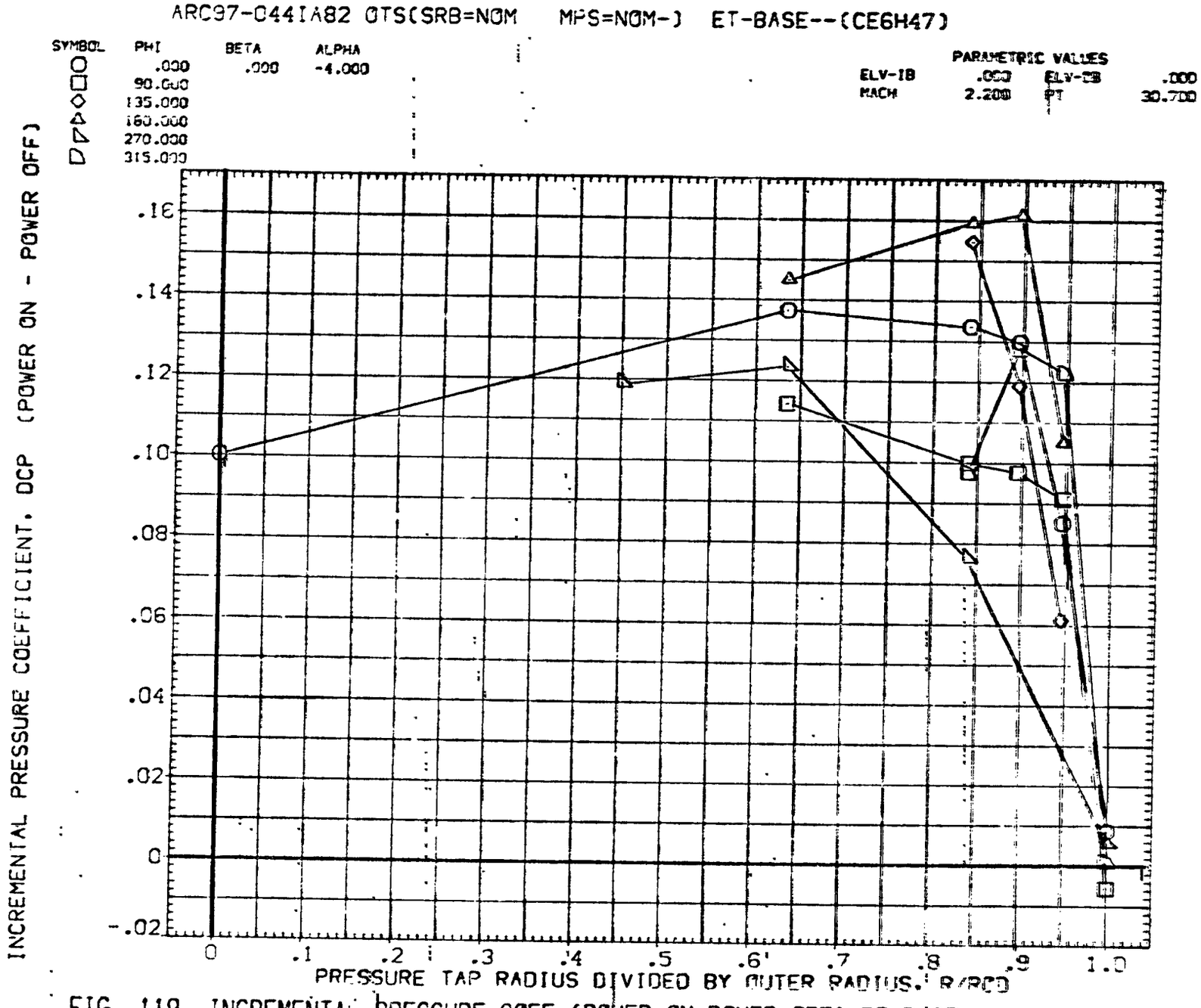


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

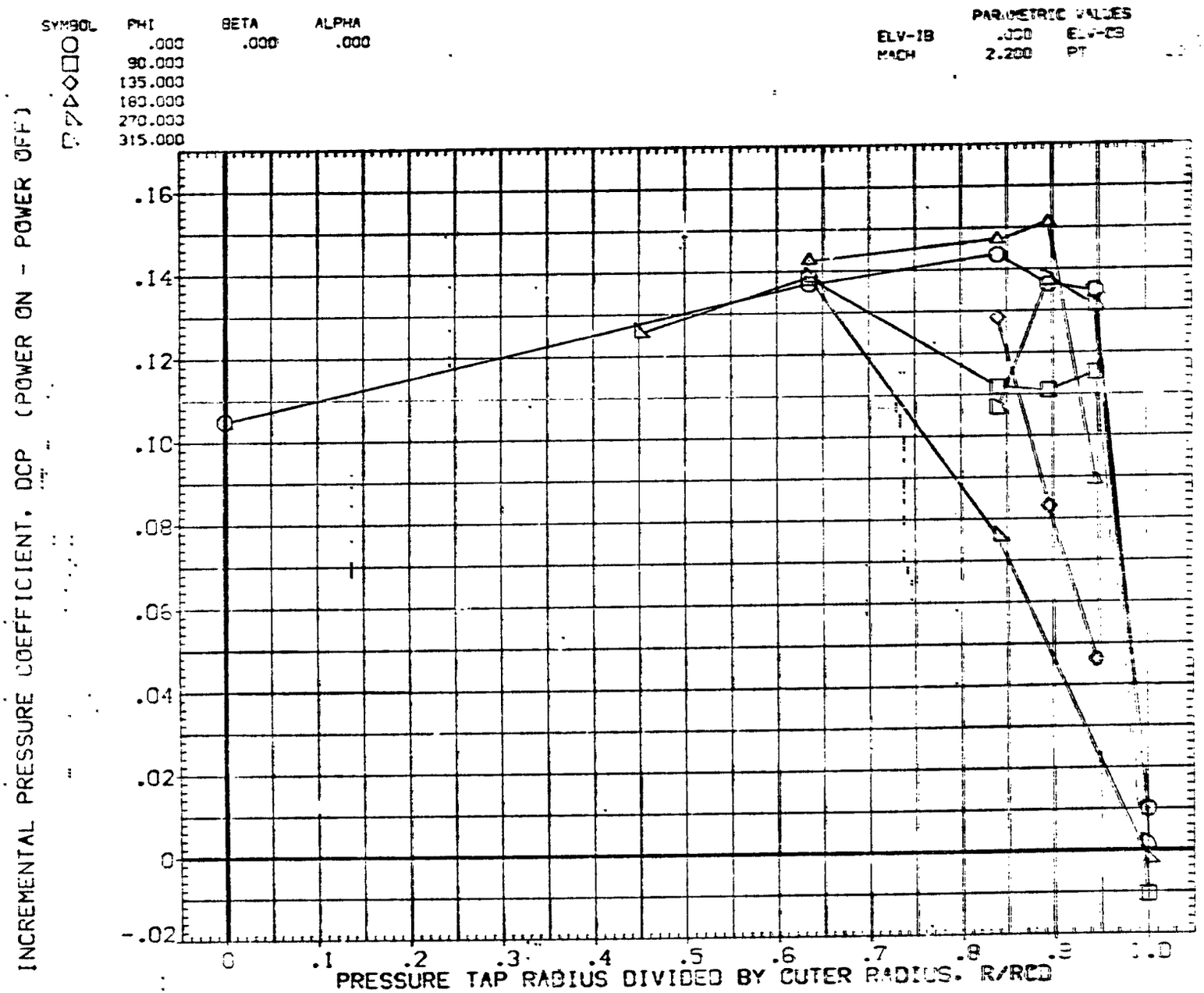


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

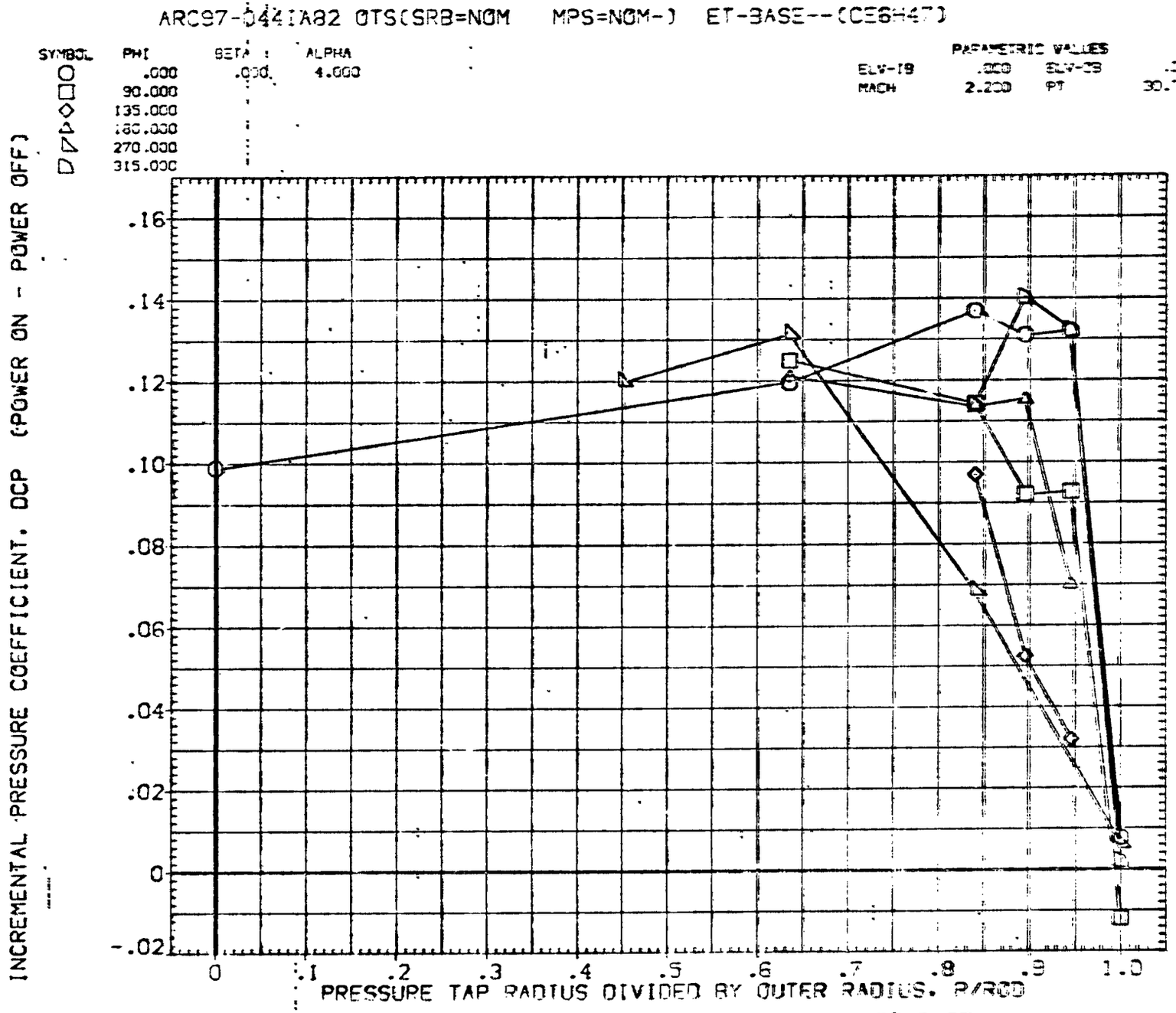


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

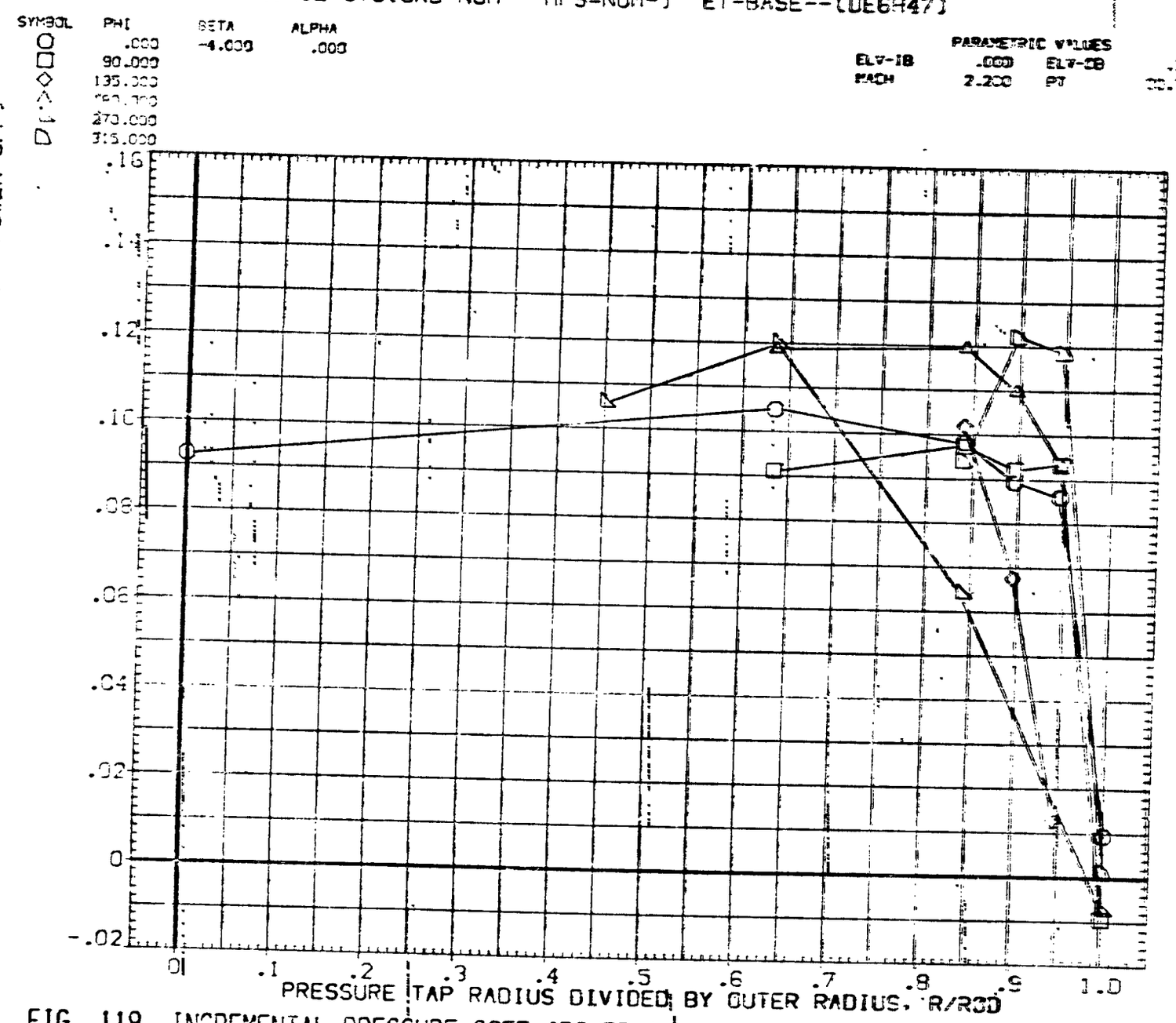


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

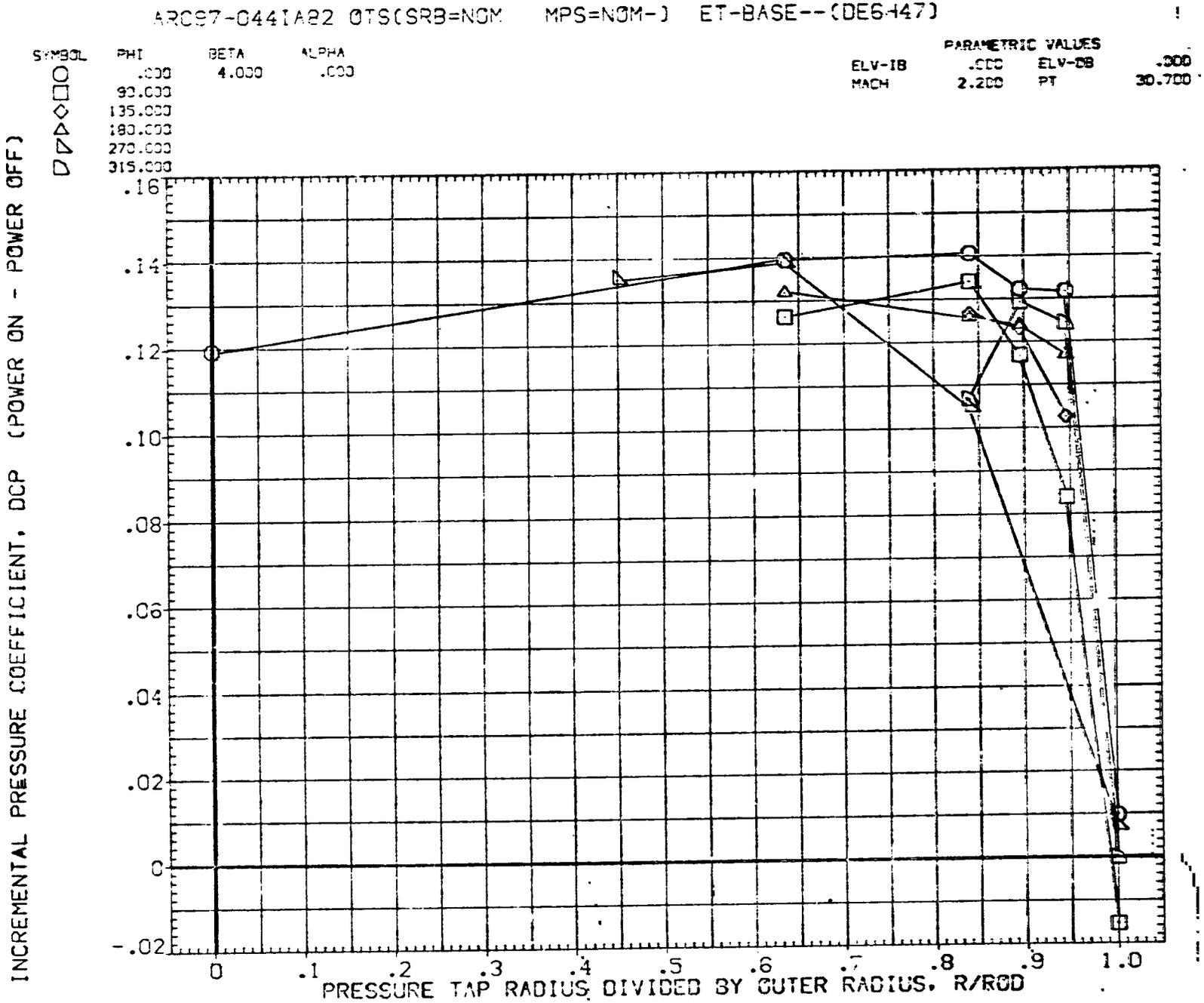


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

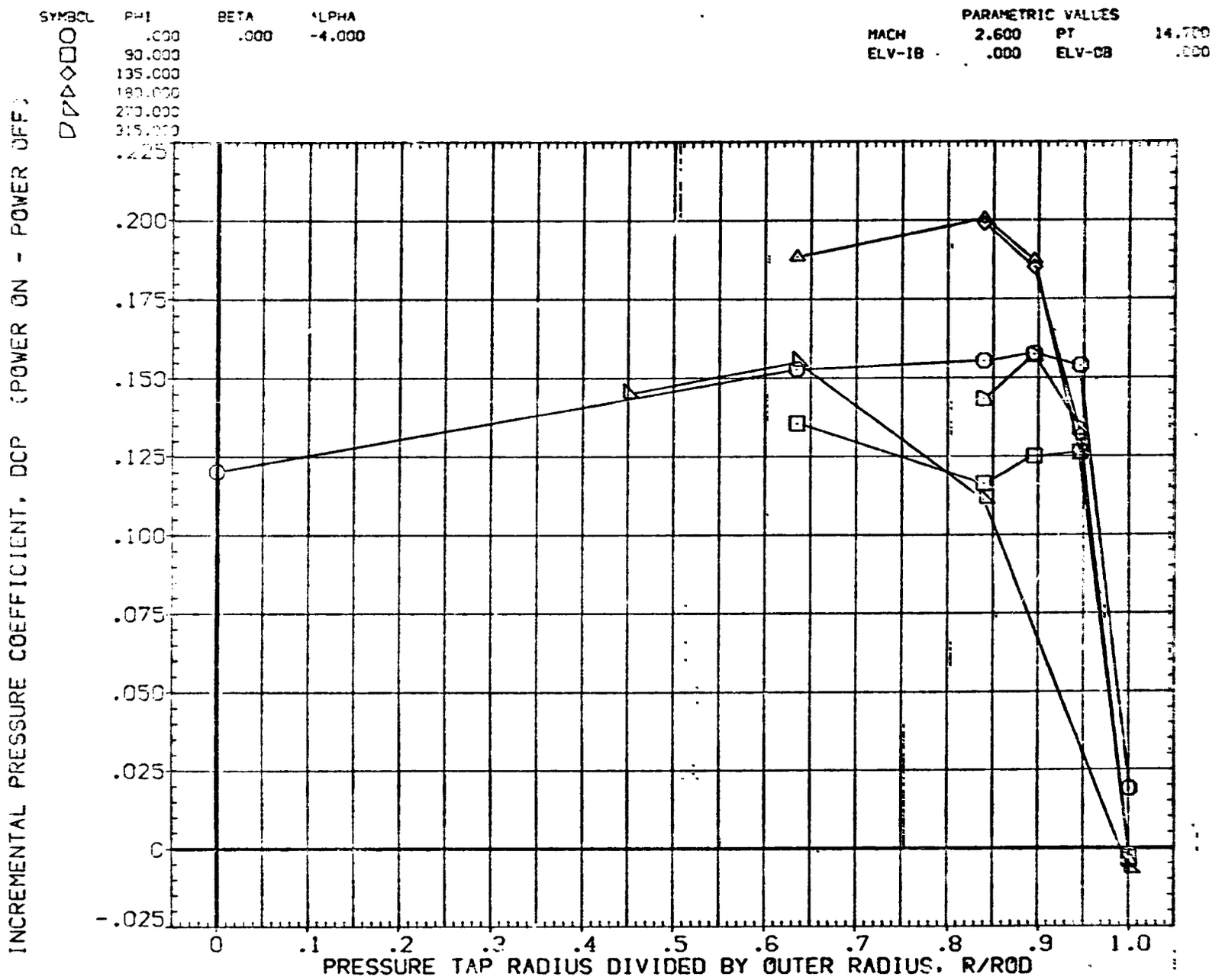


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

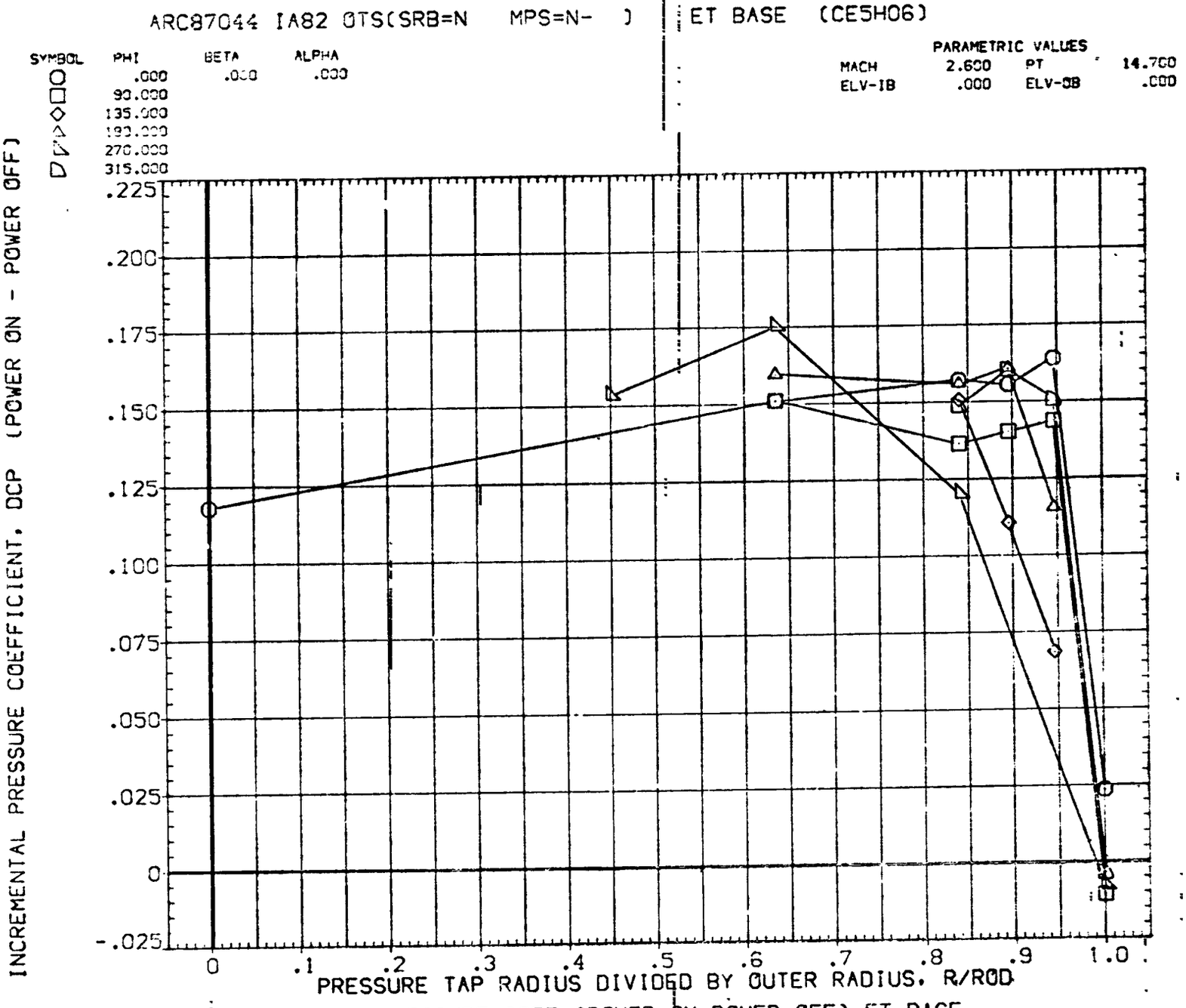


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

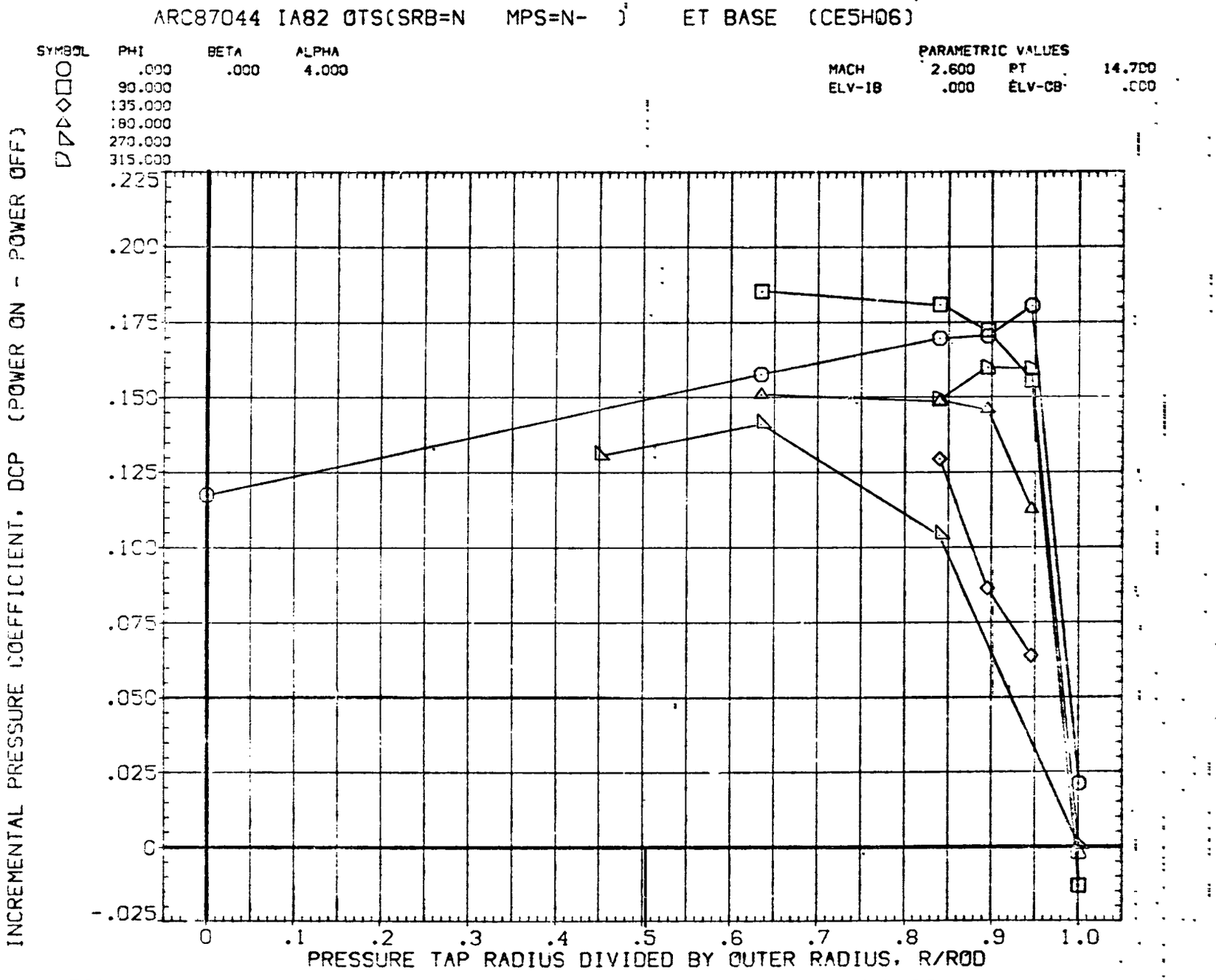


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

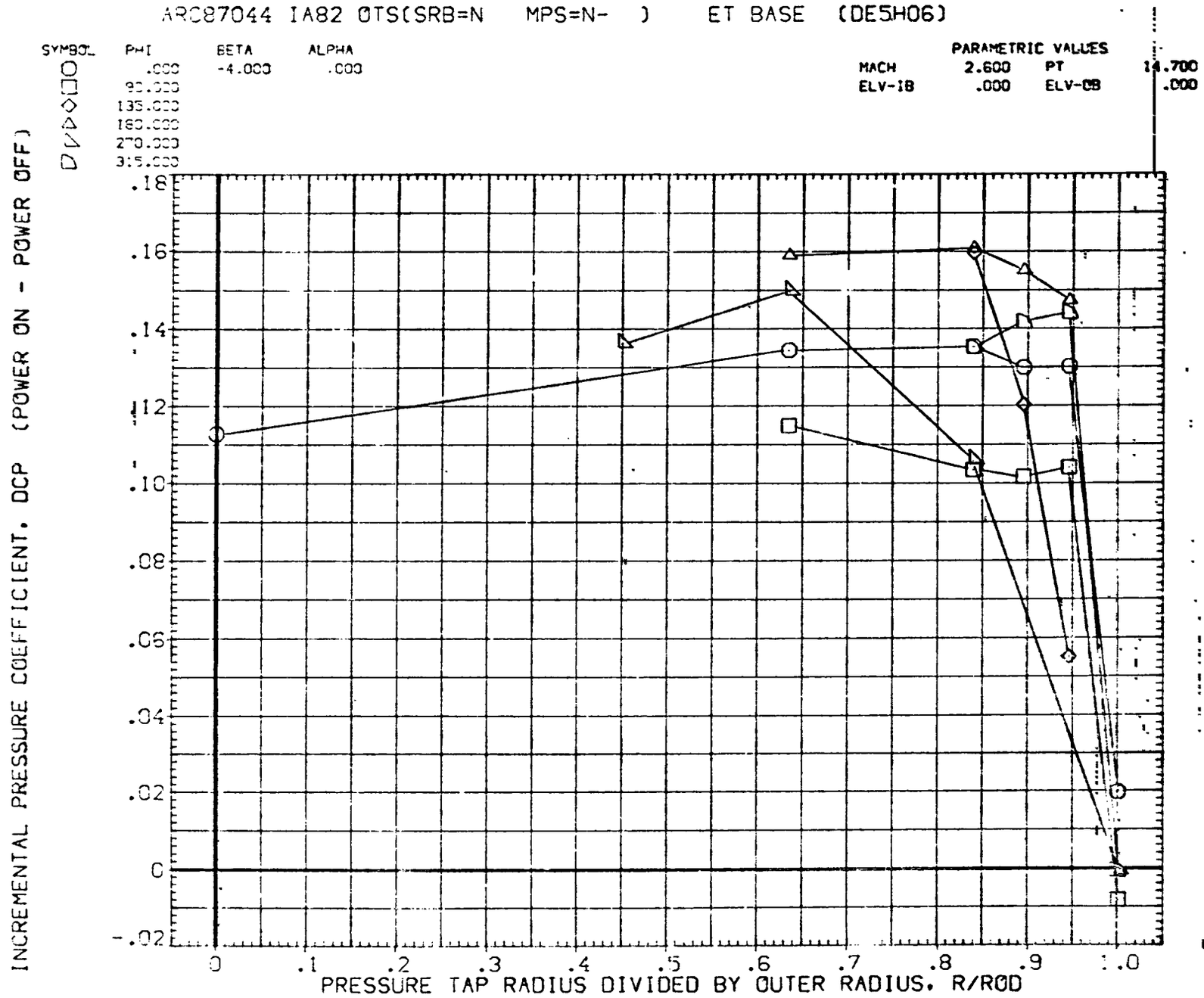


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

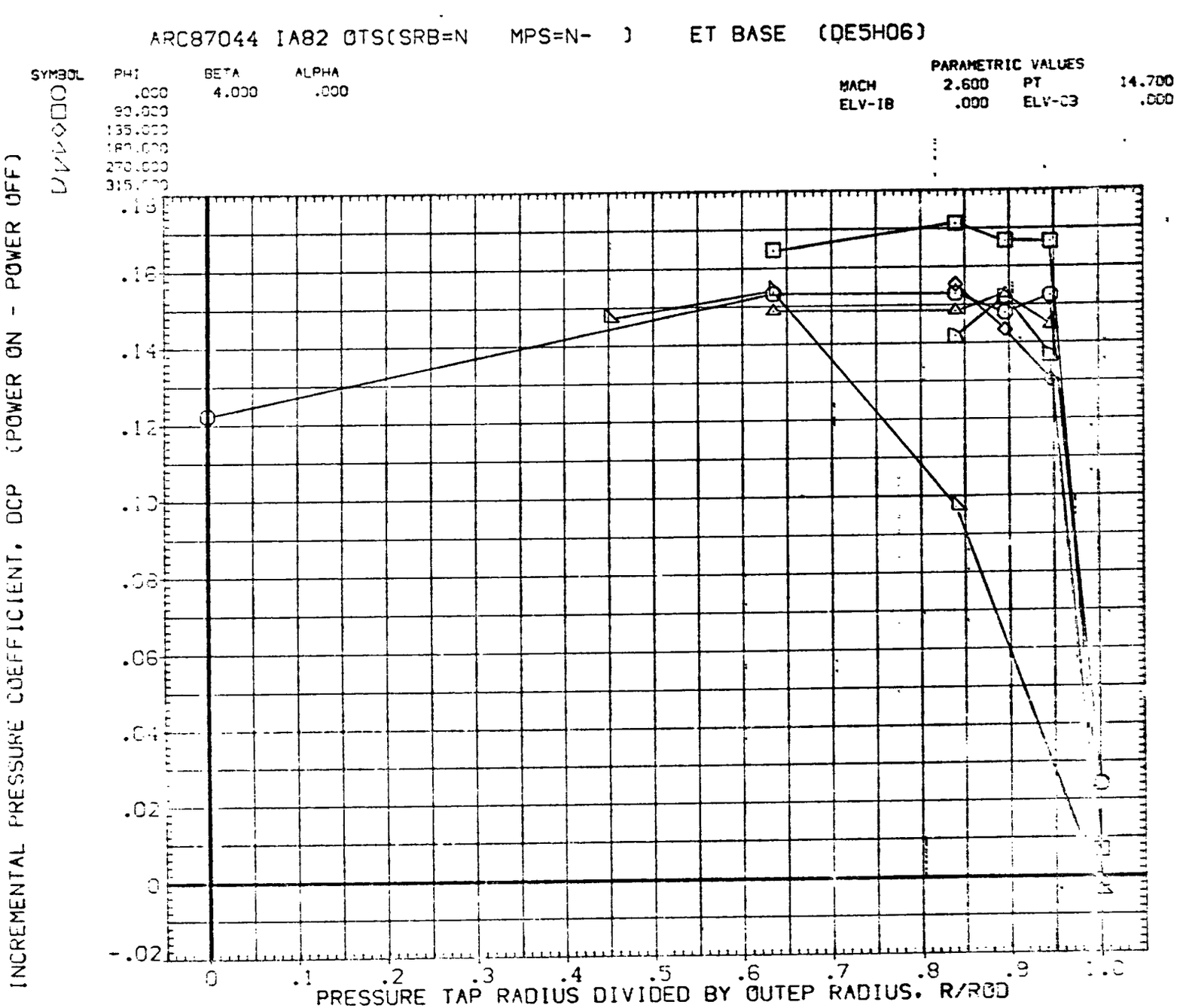


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

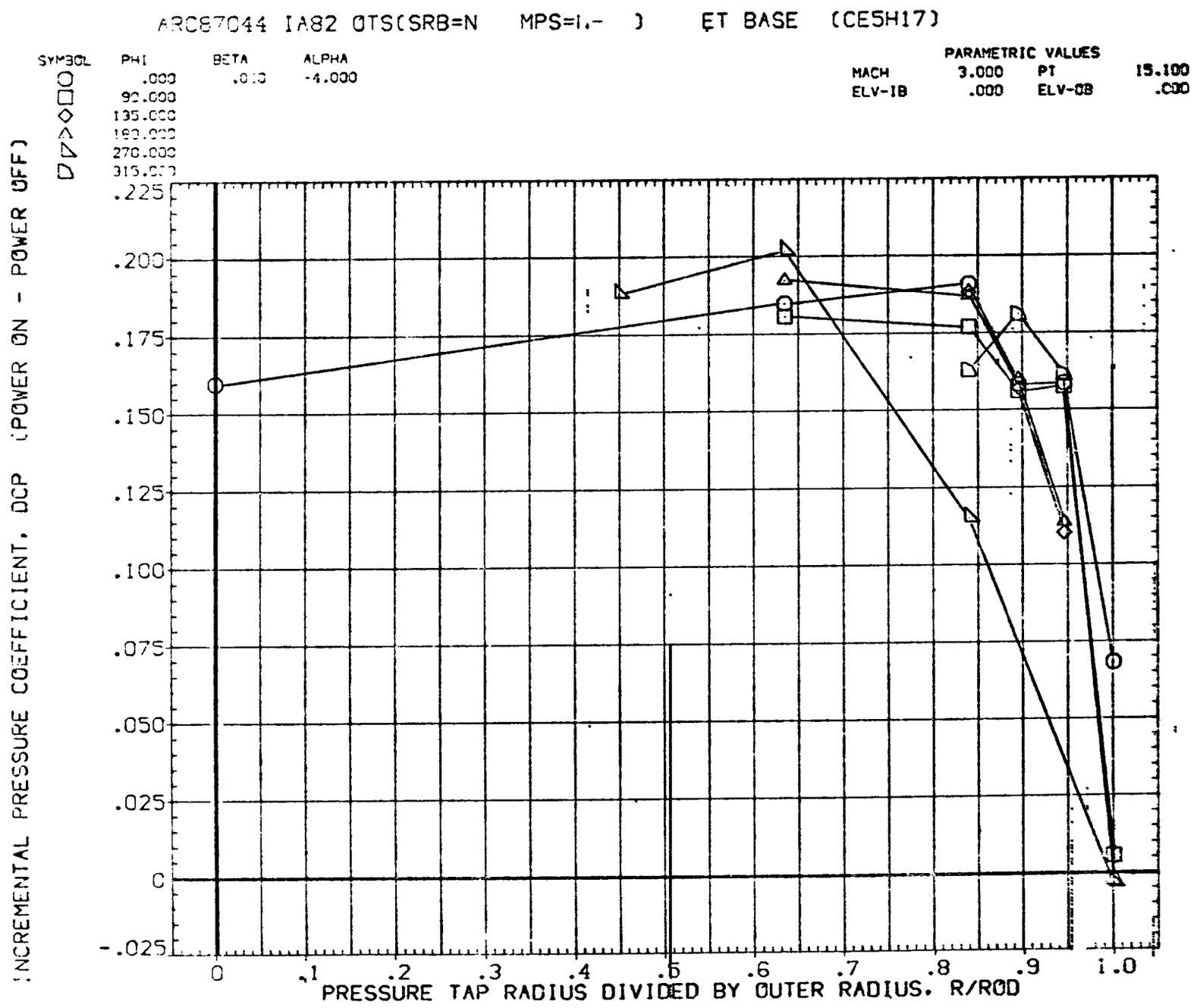


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

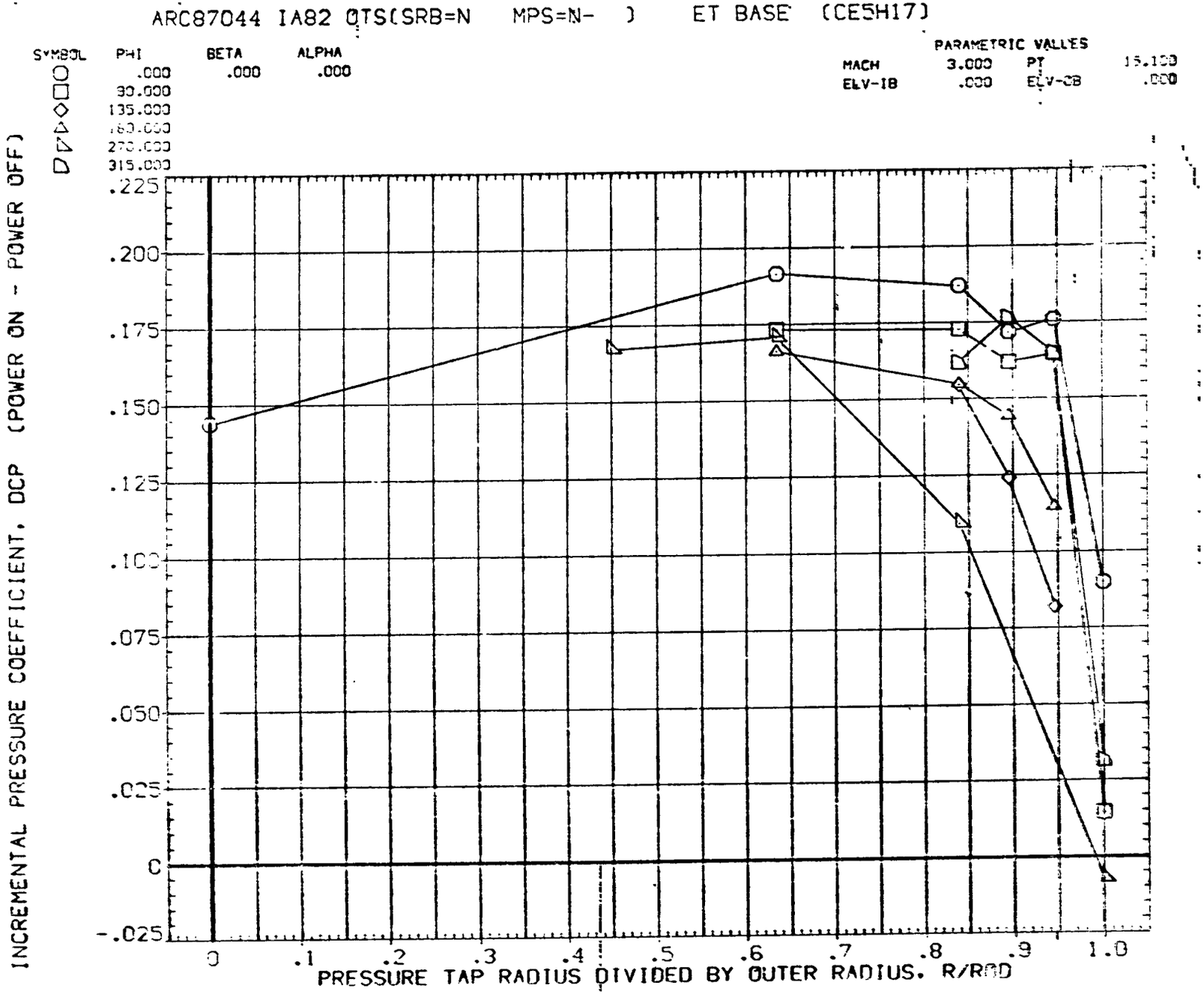


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

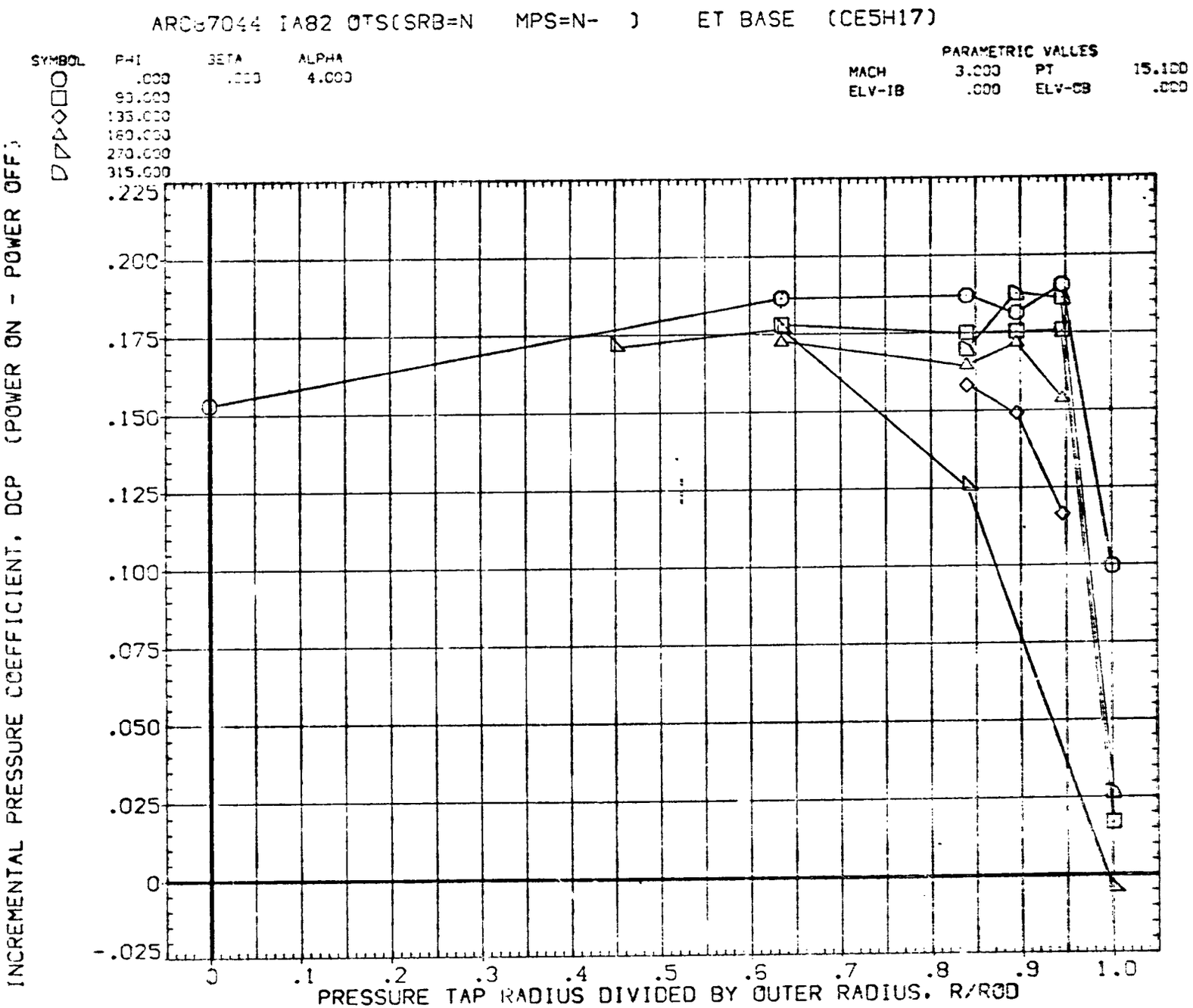


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

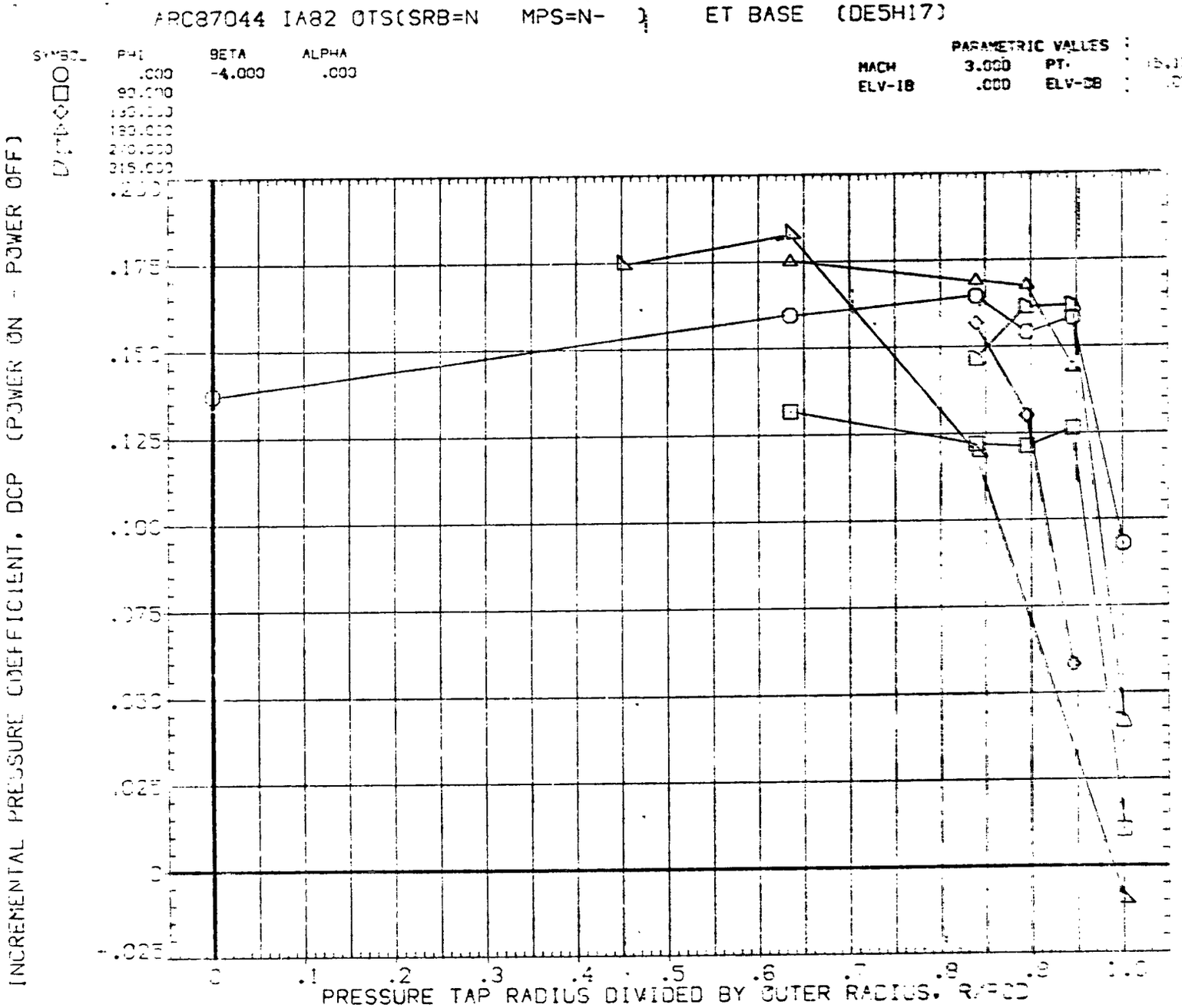


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

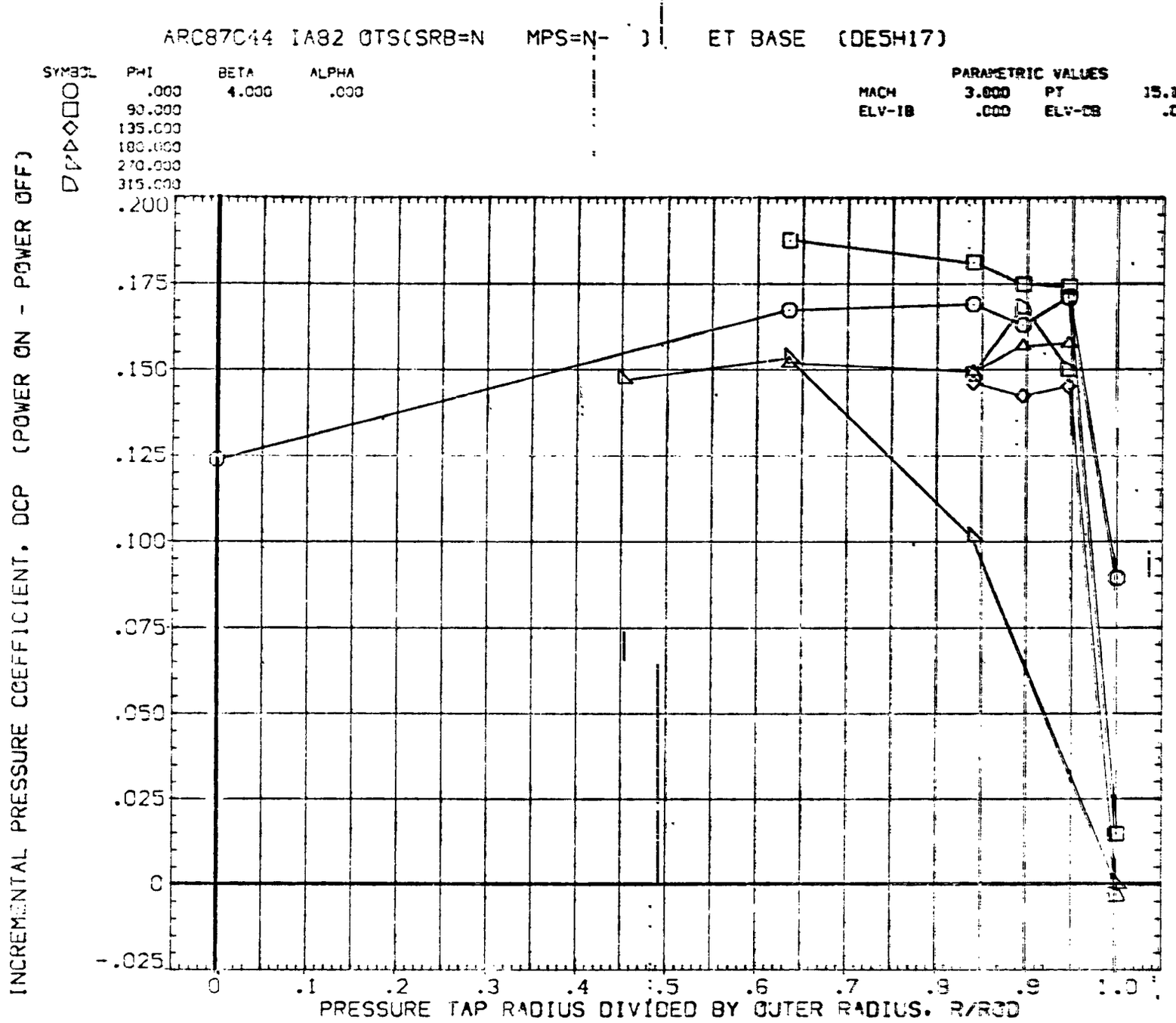


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

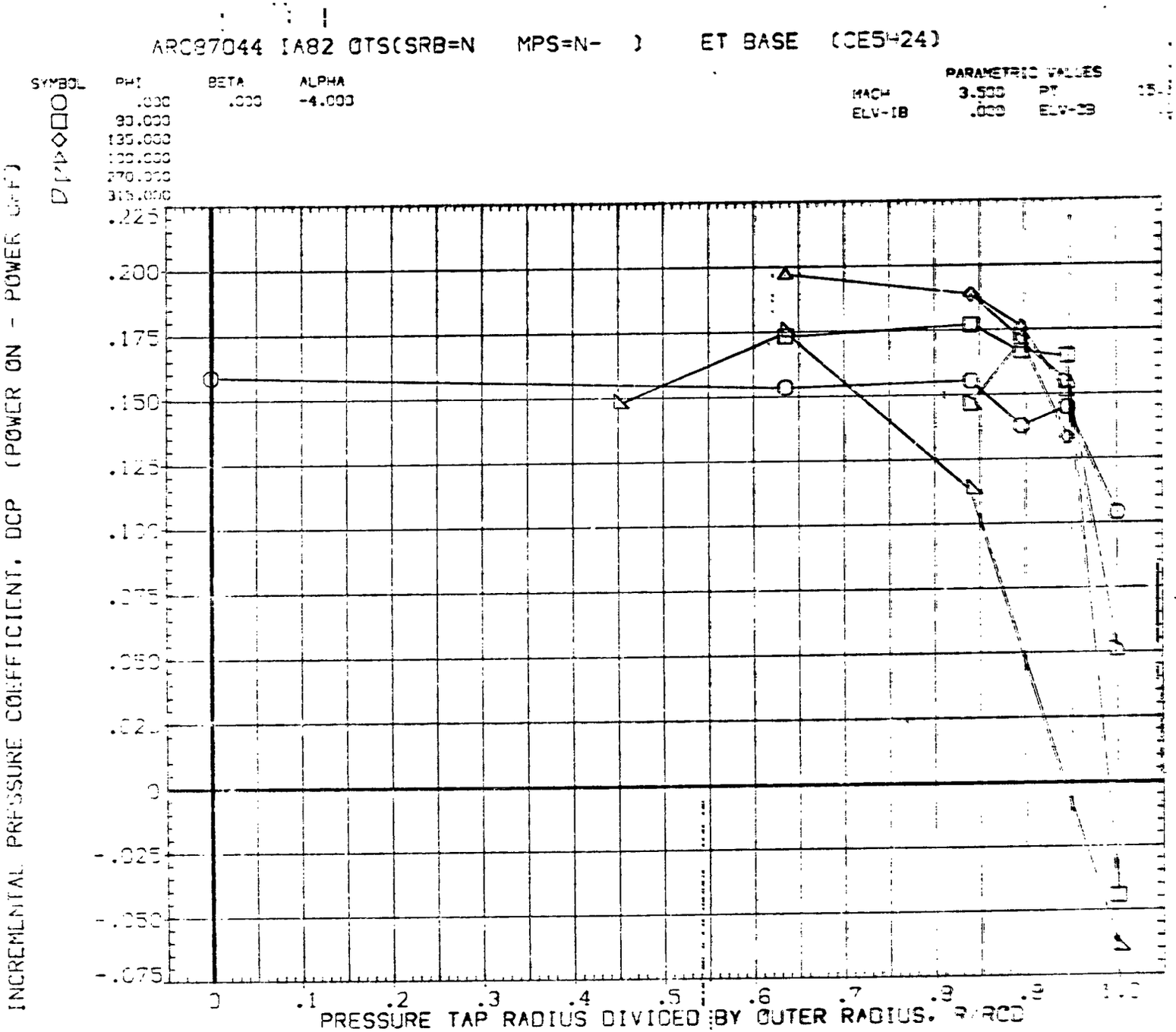


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

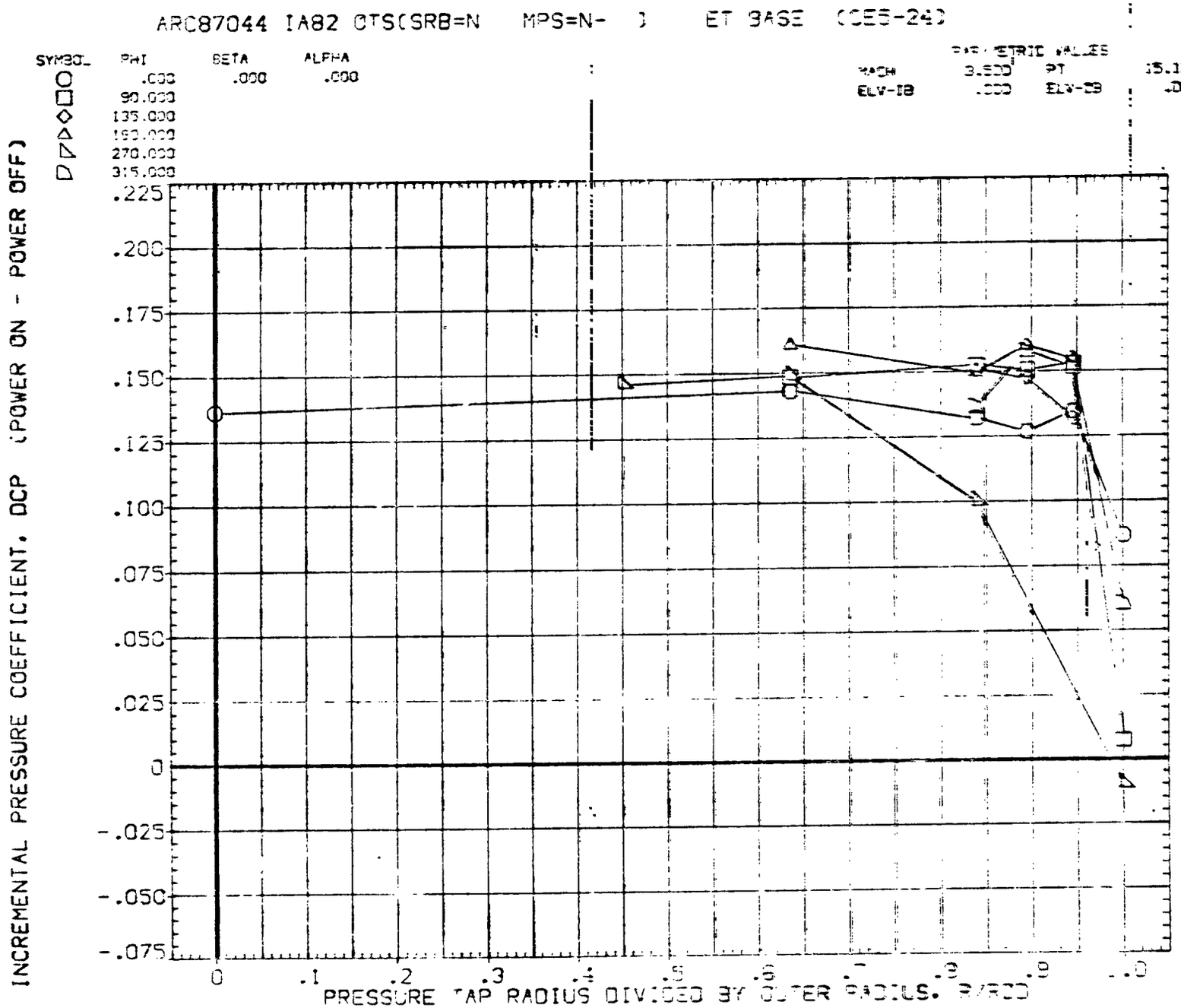


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

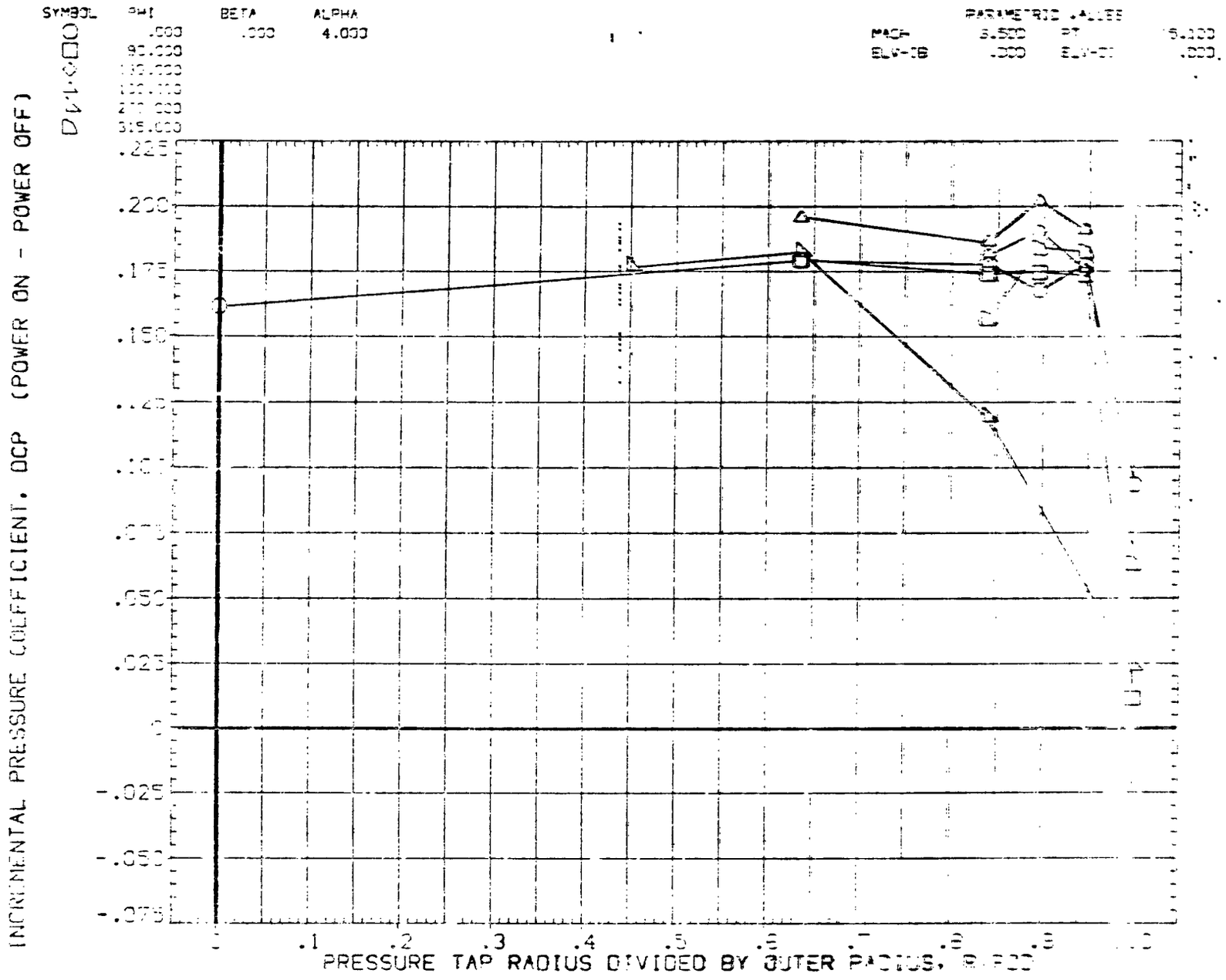


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

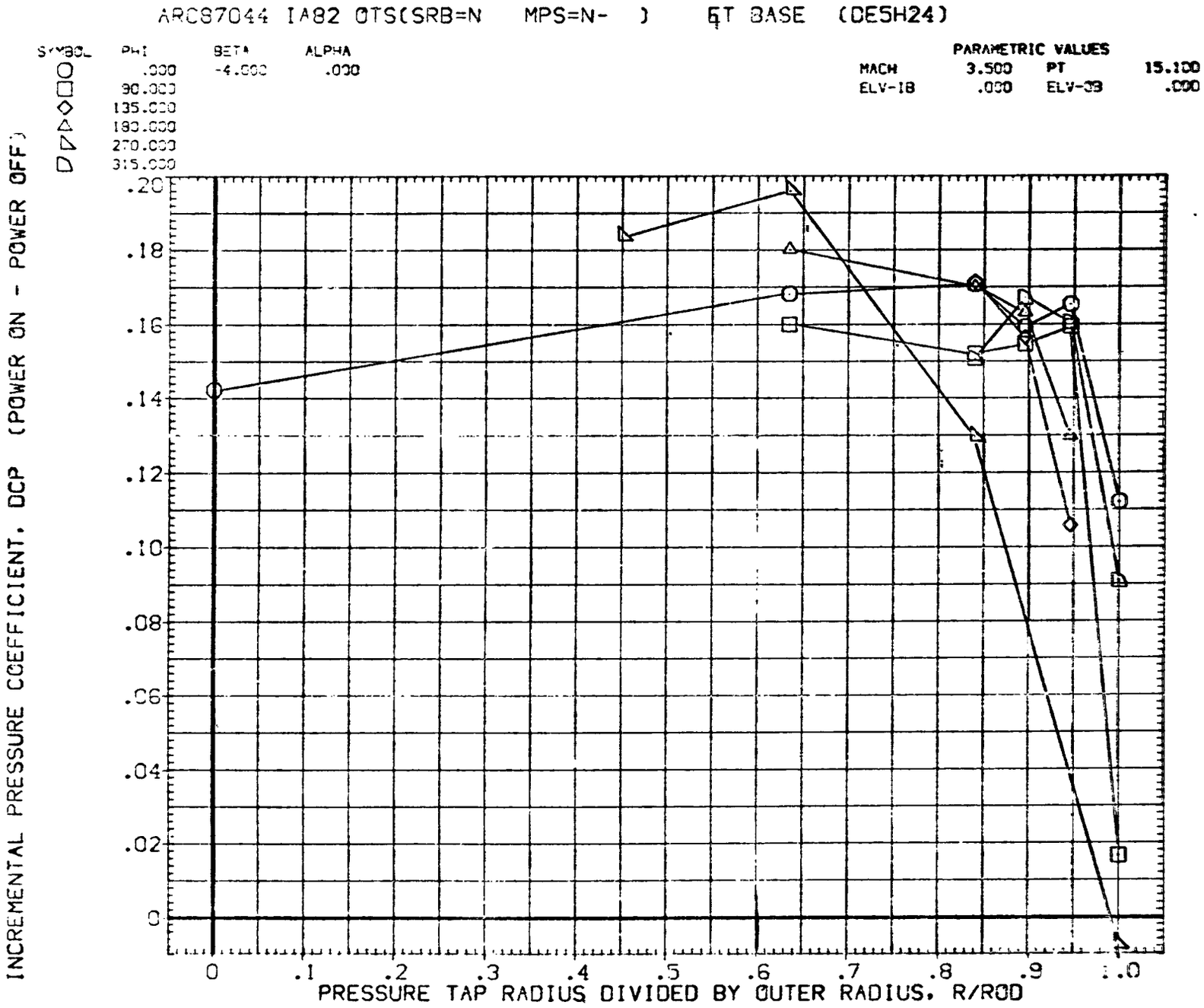


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

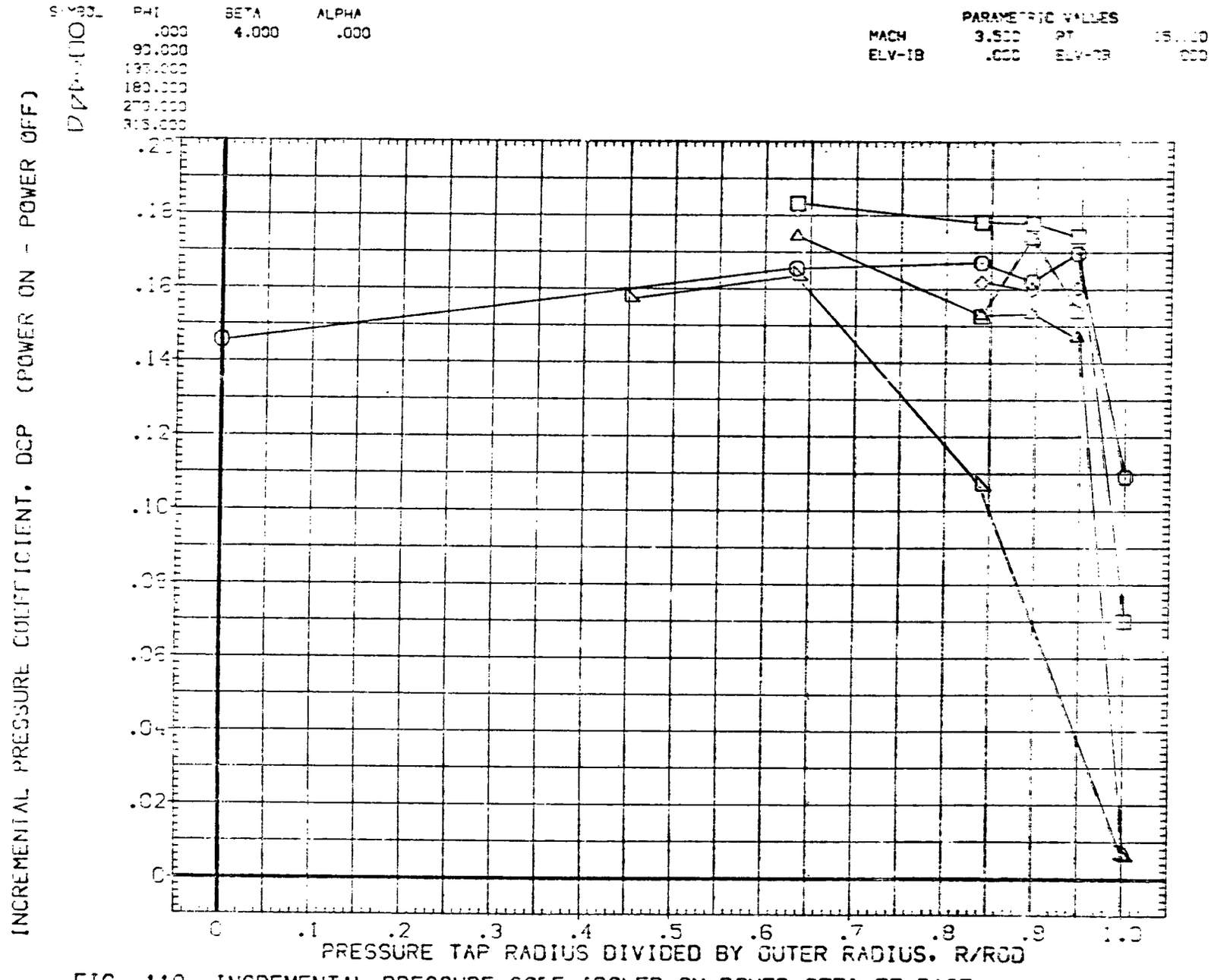


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

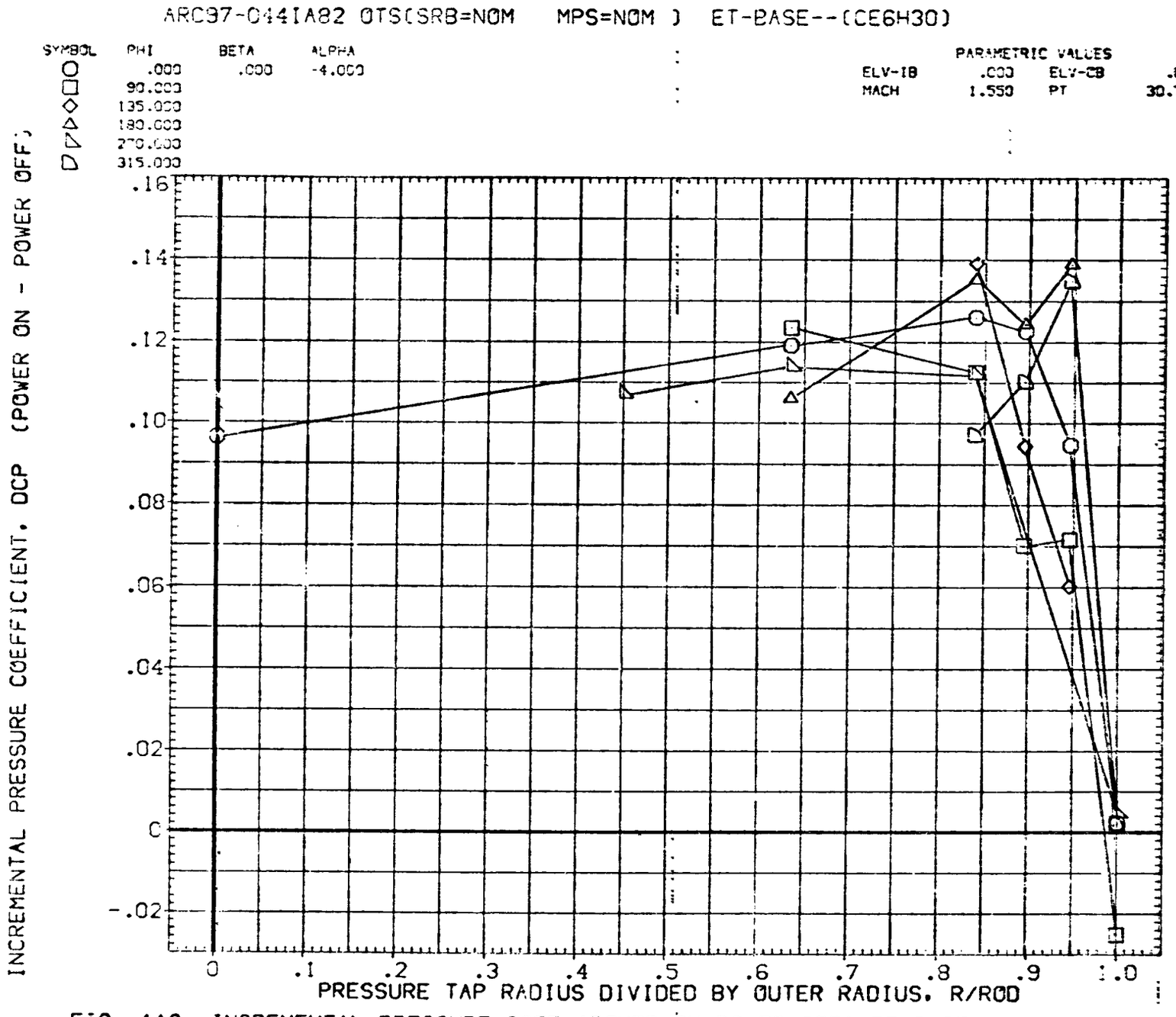


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

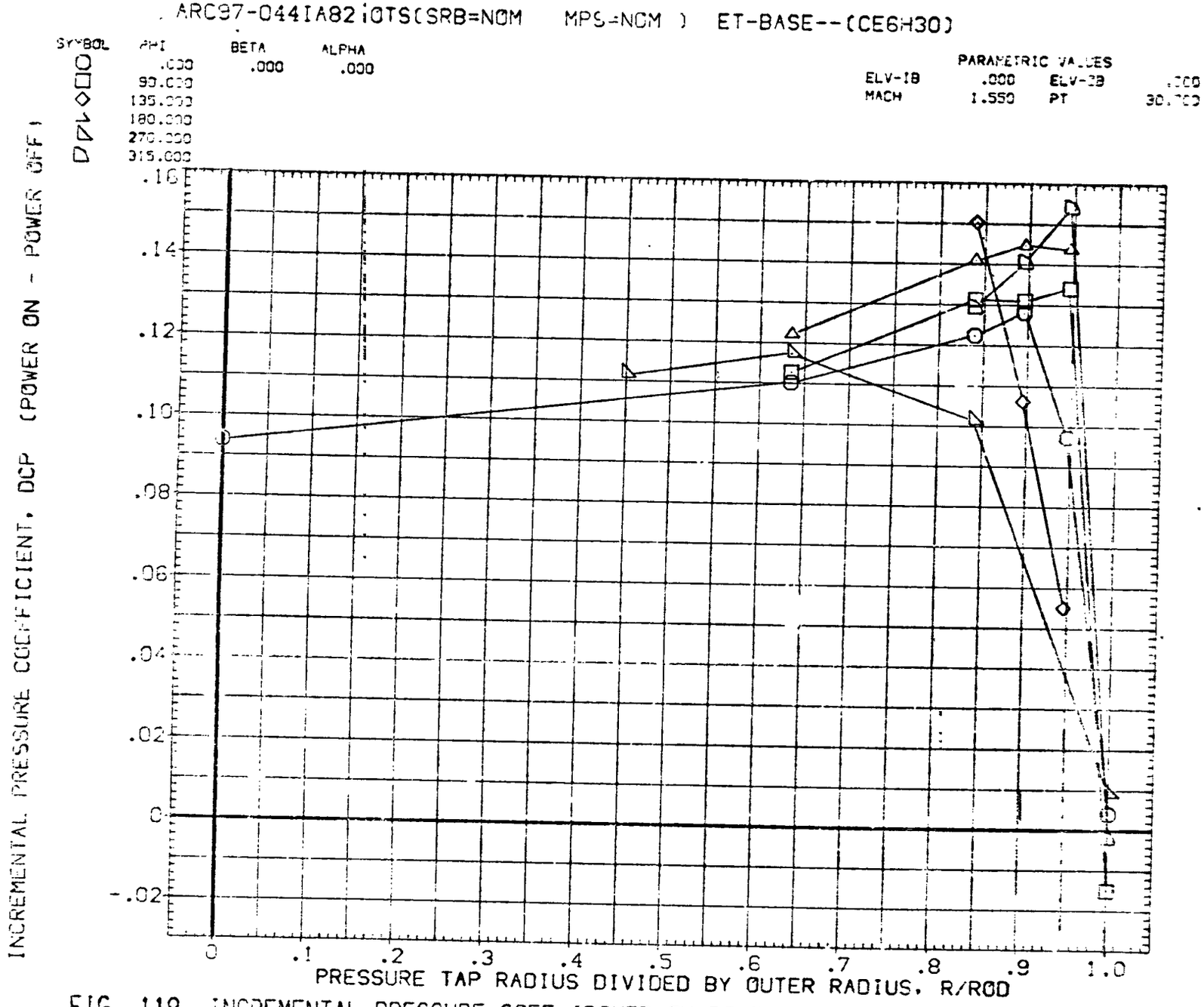


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

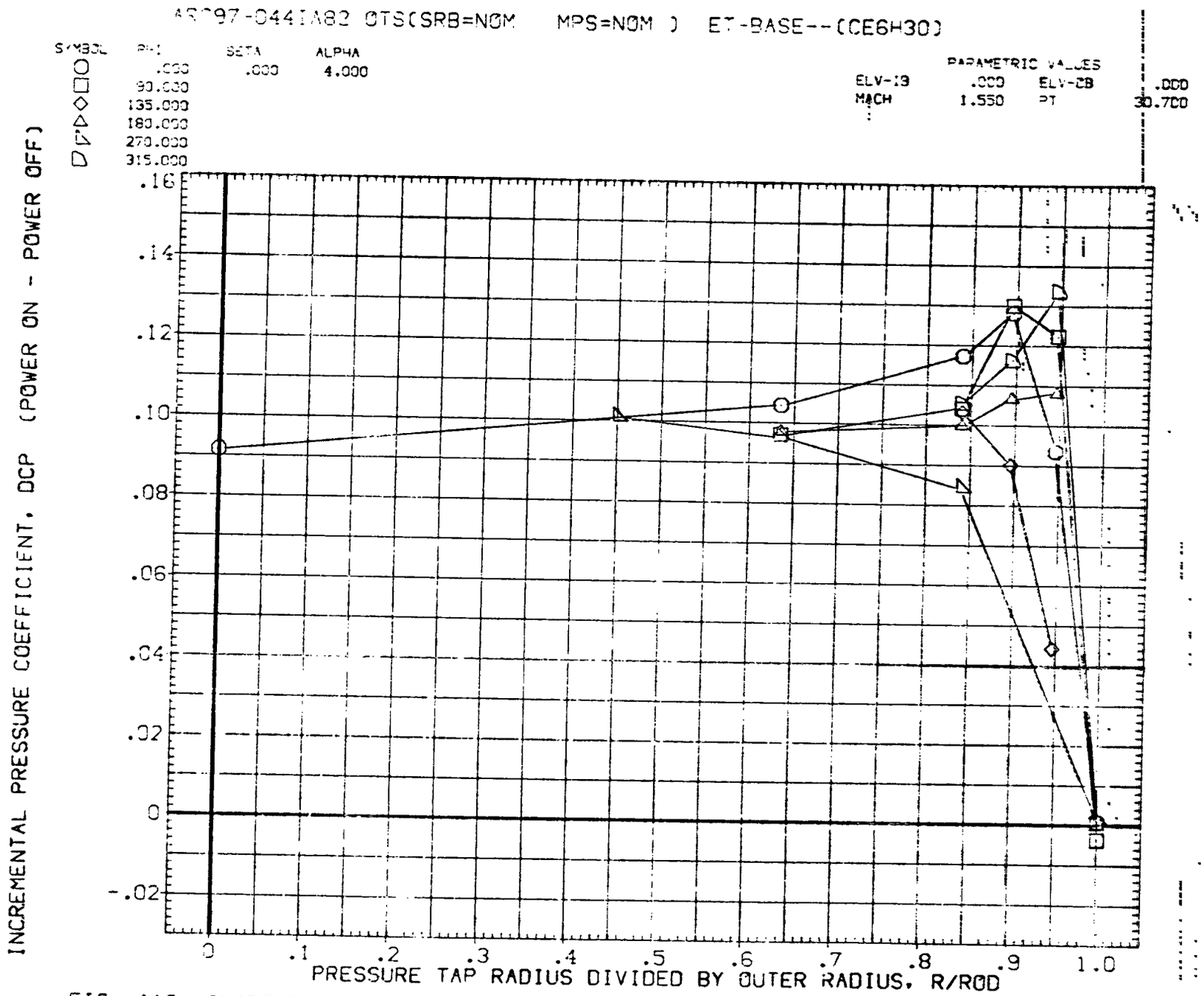


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

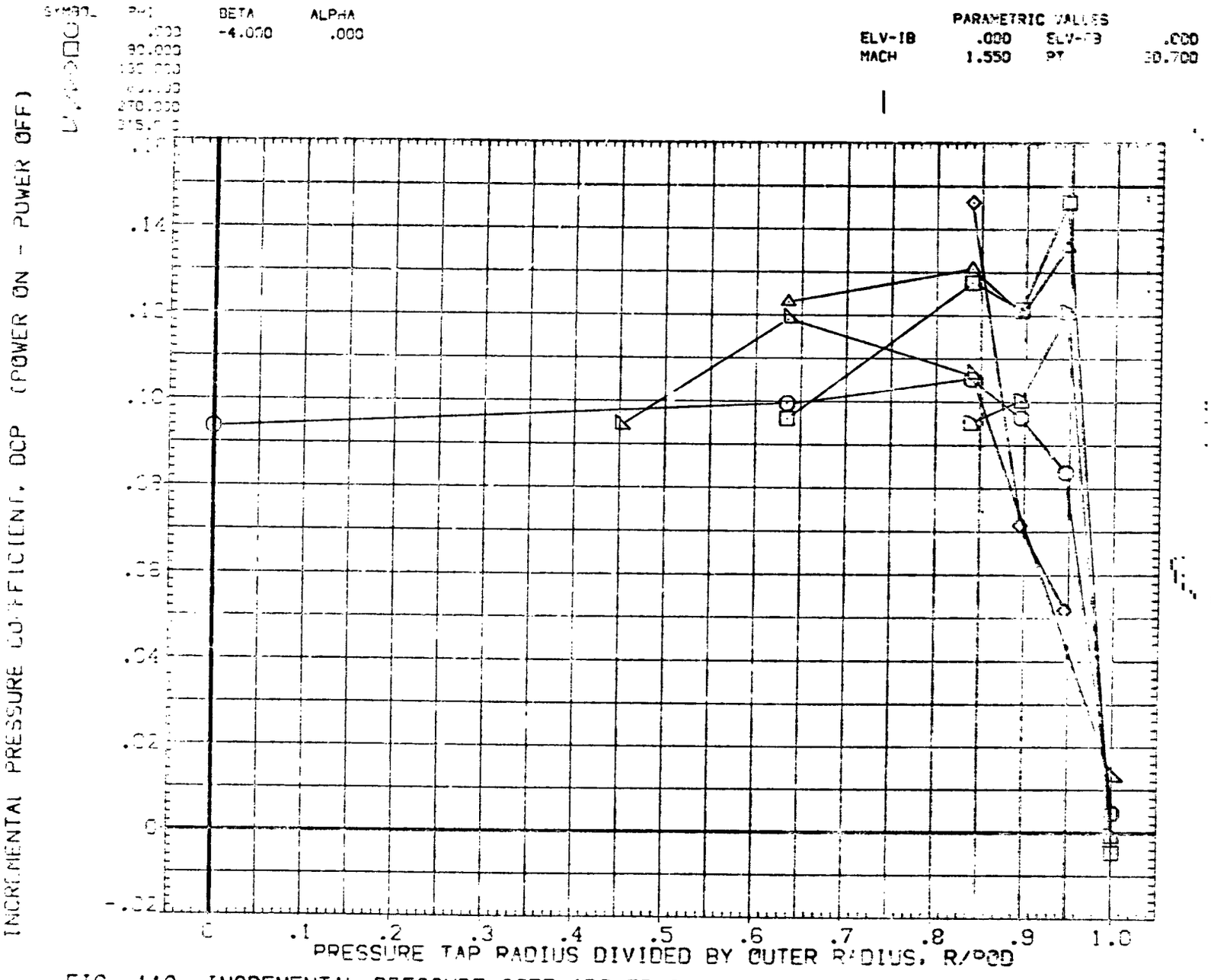


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

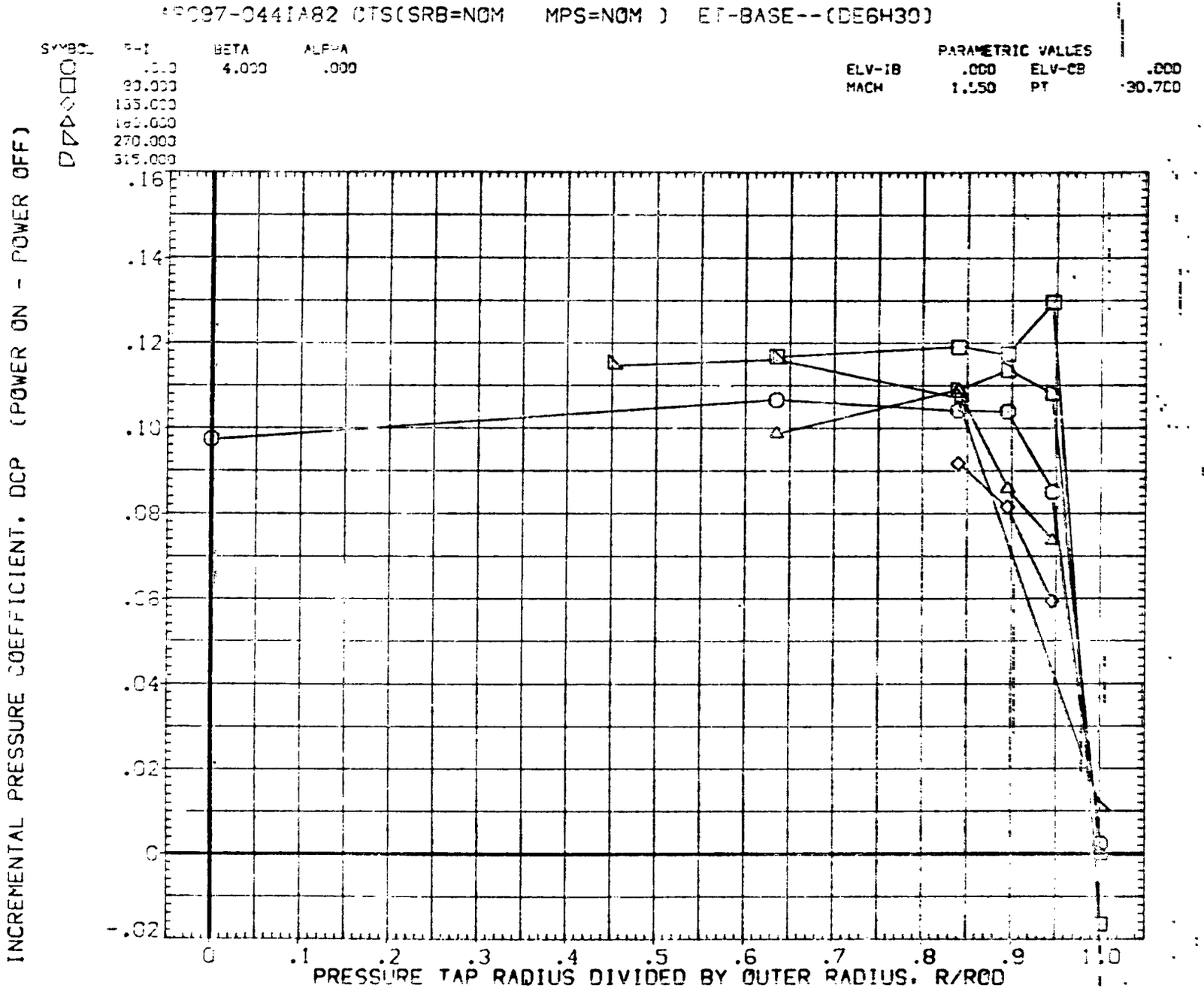


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

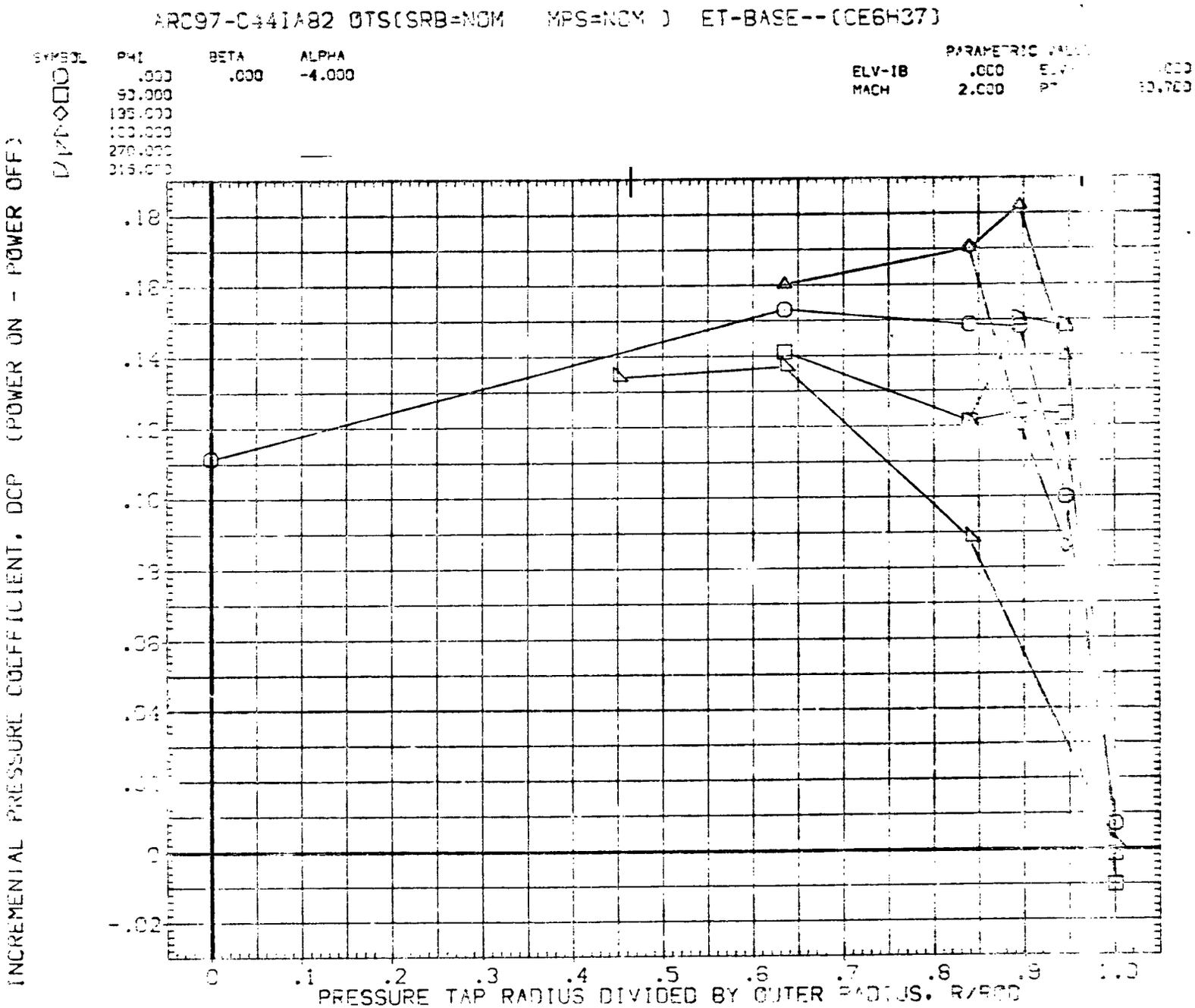


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

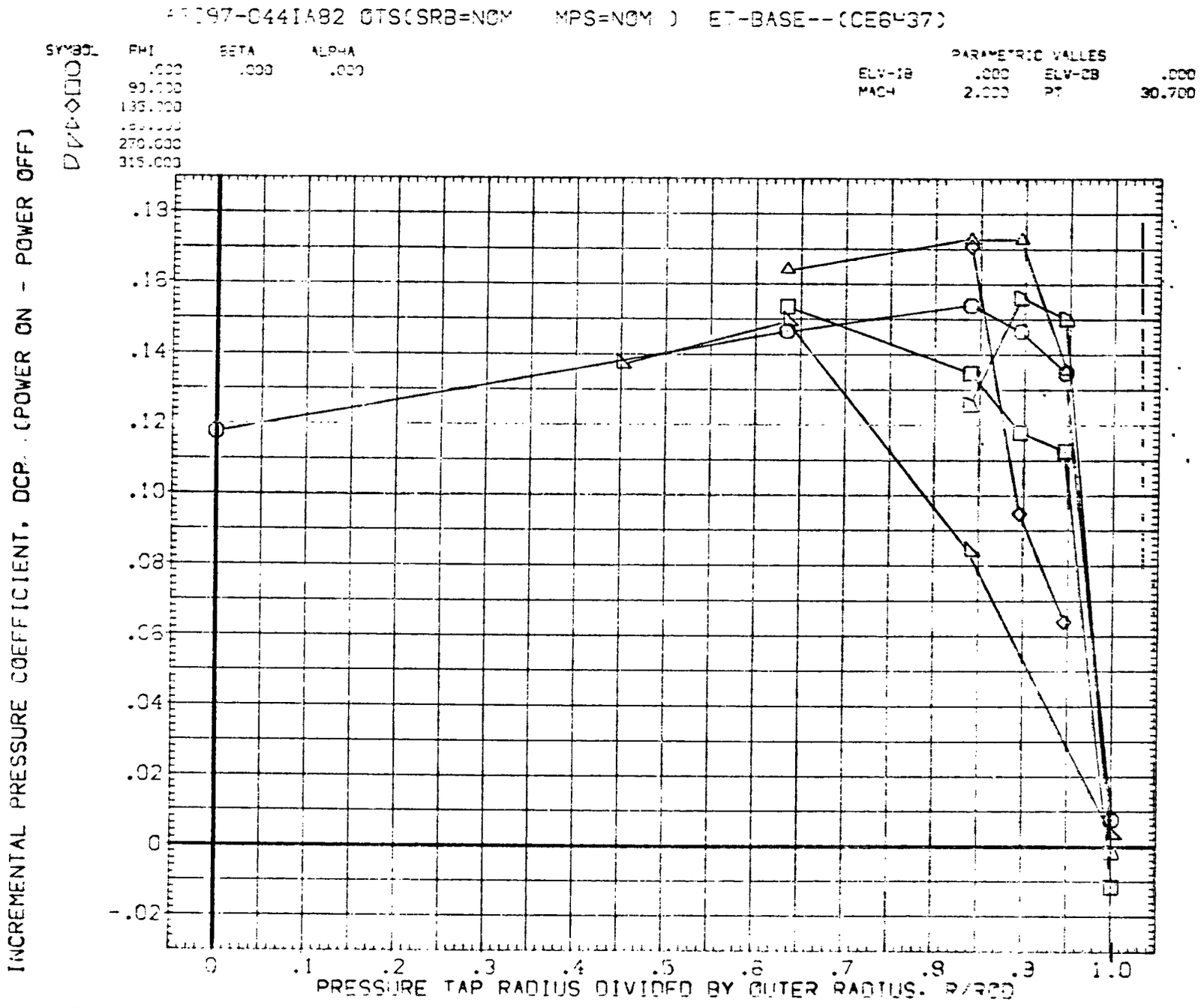


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

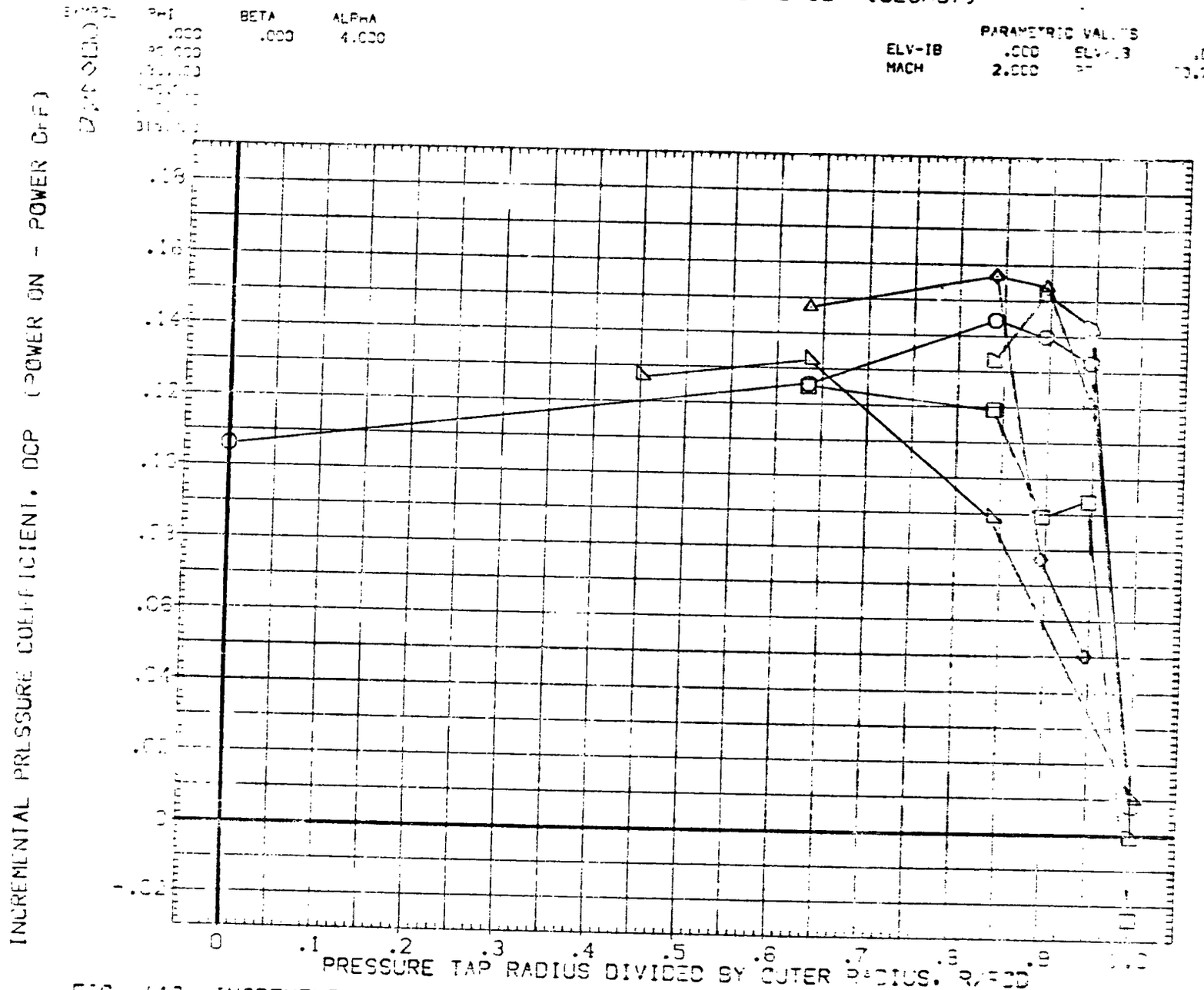


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

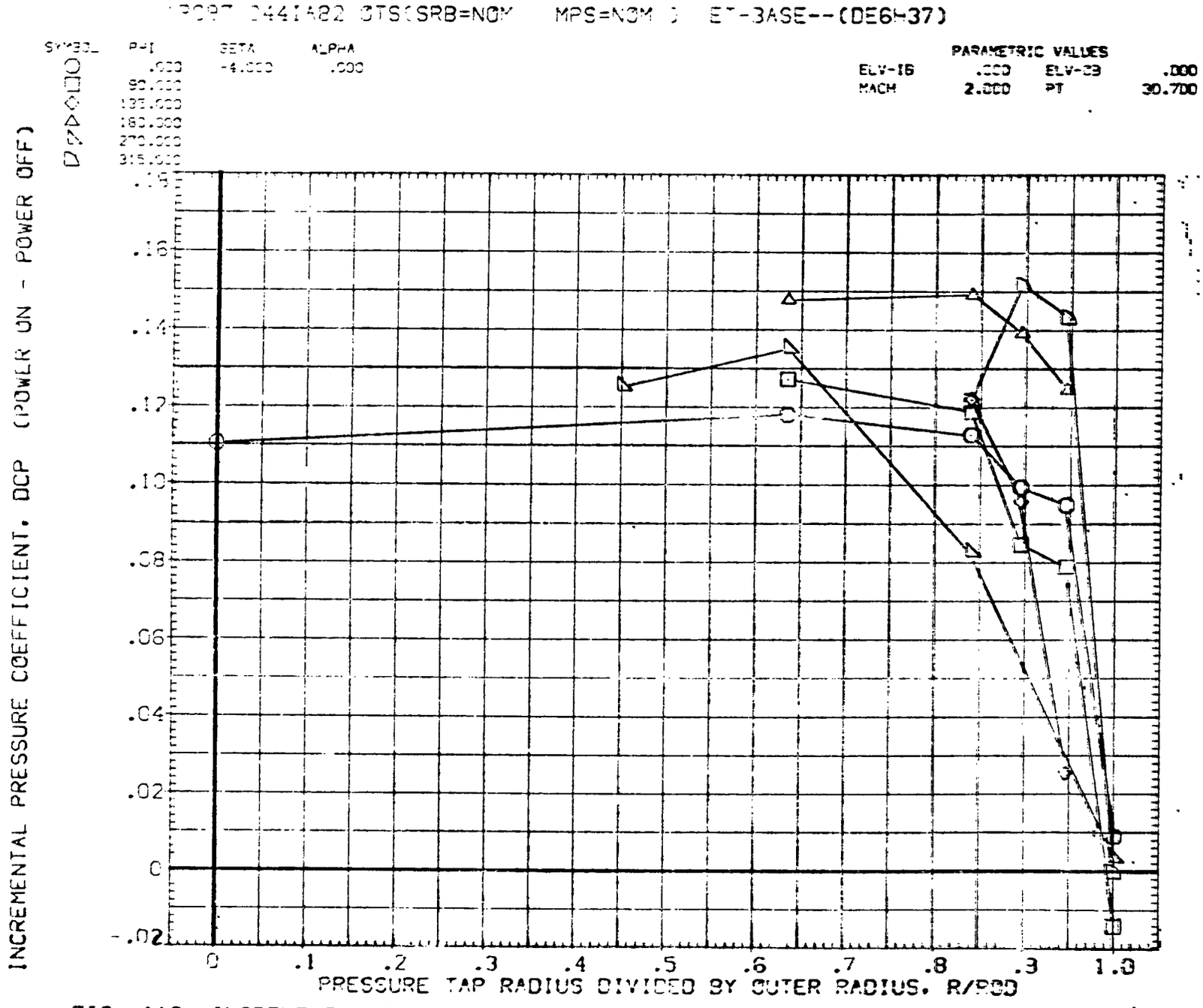


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

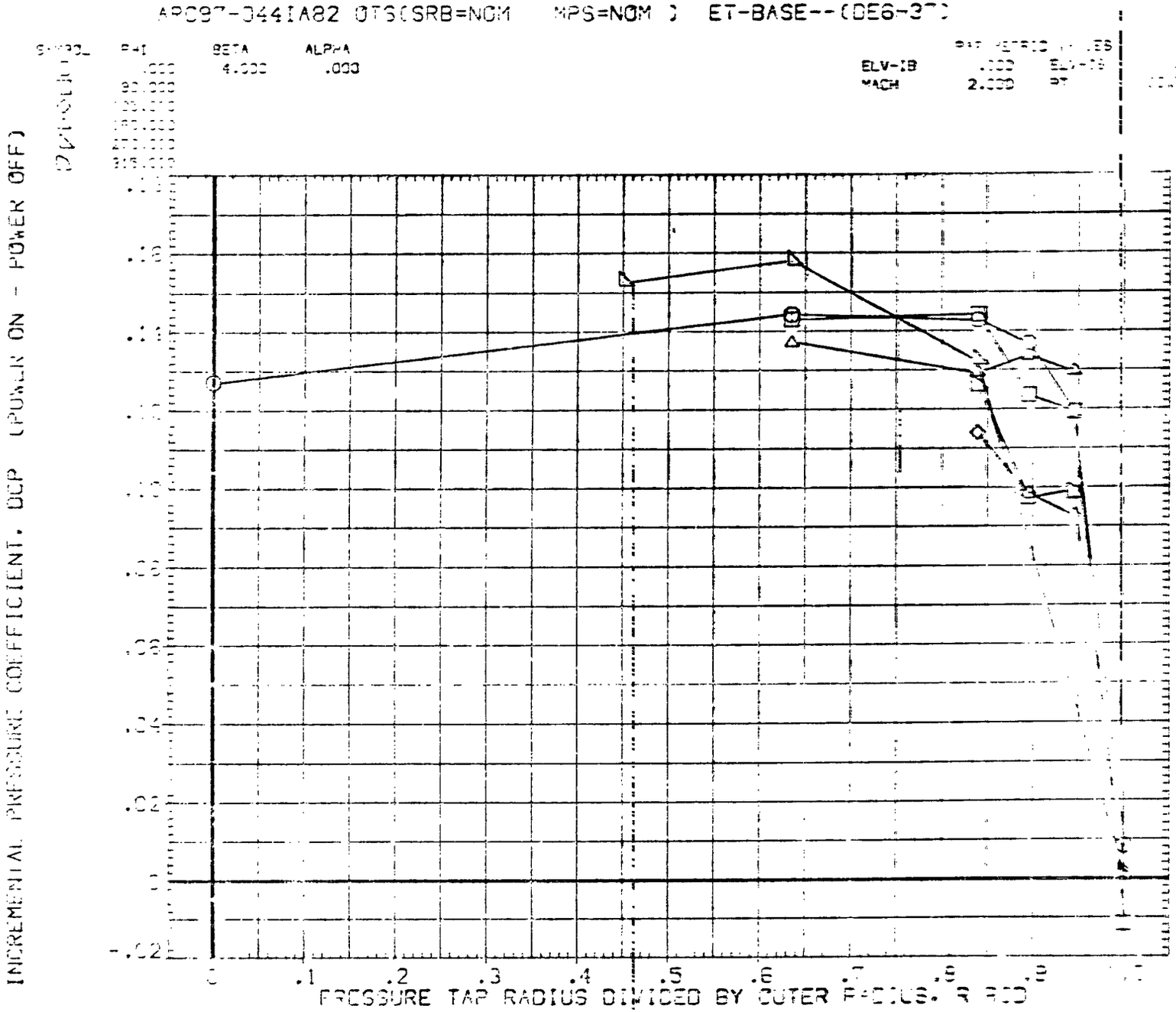


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

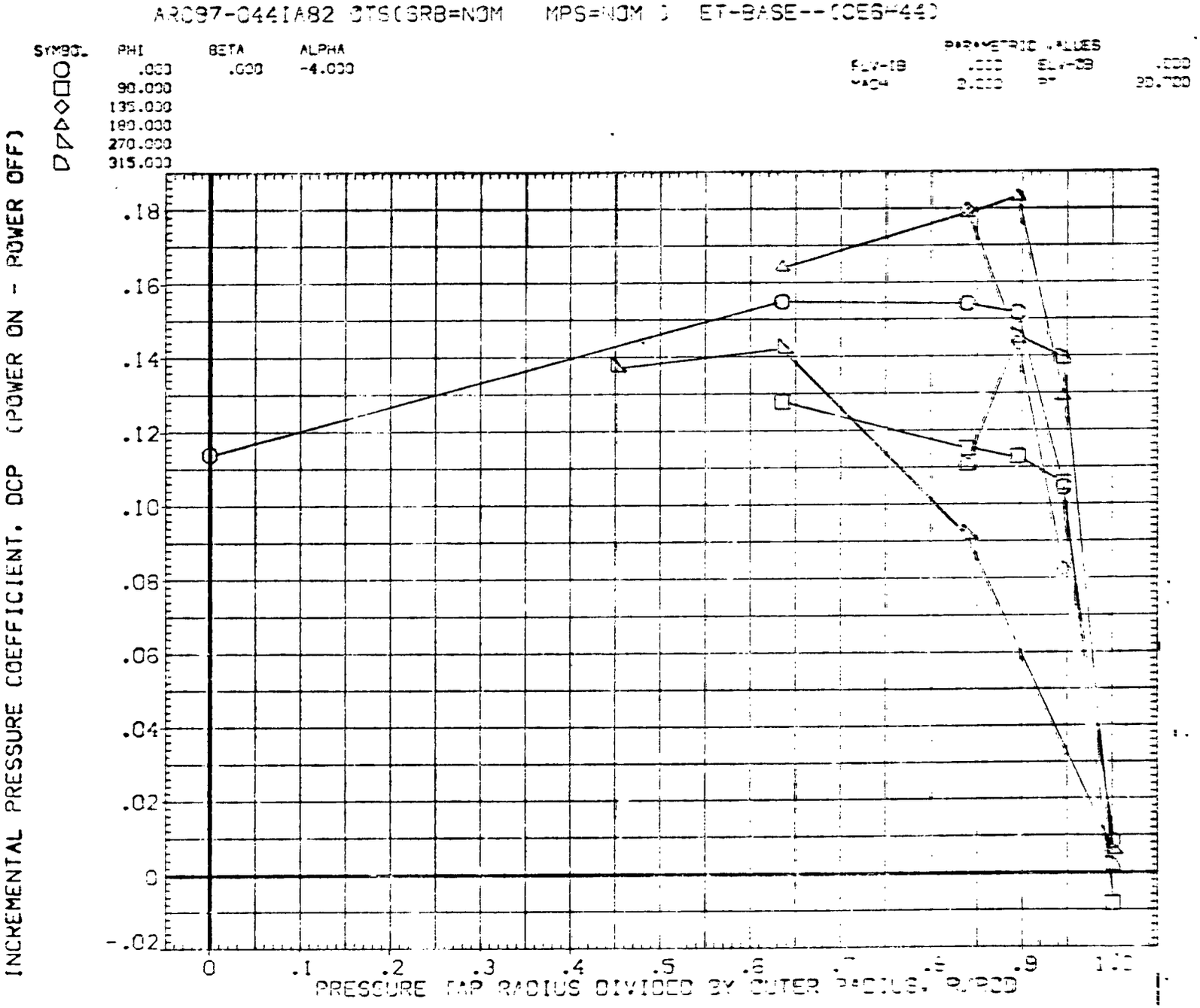


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

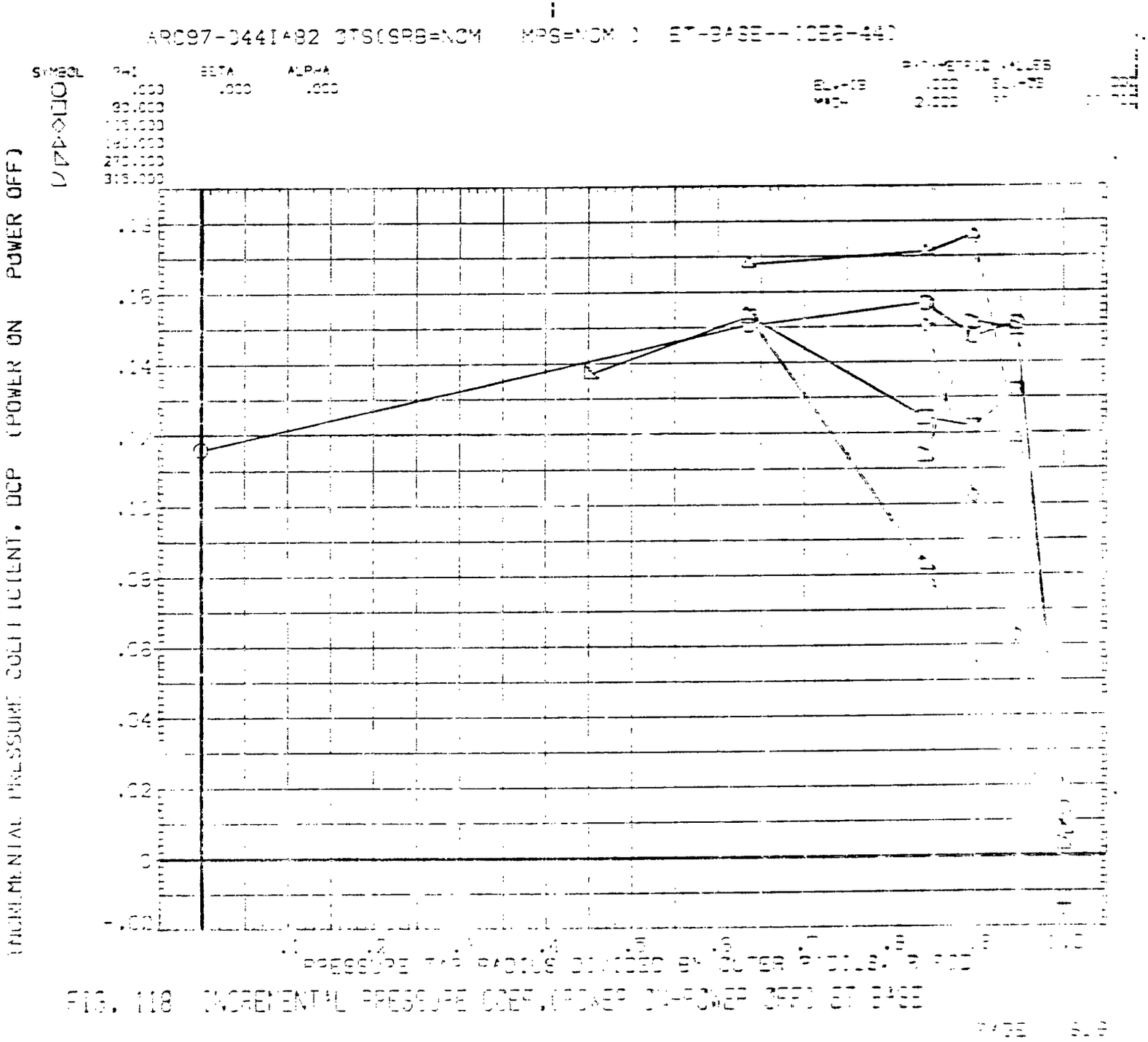


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) AT BASE

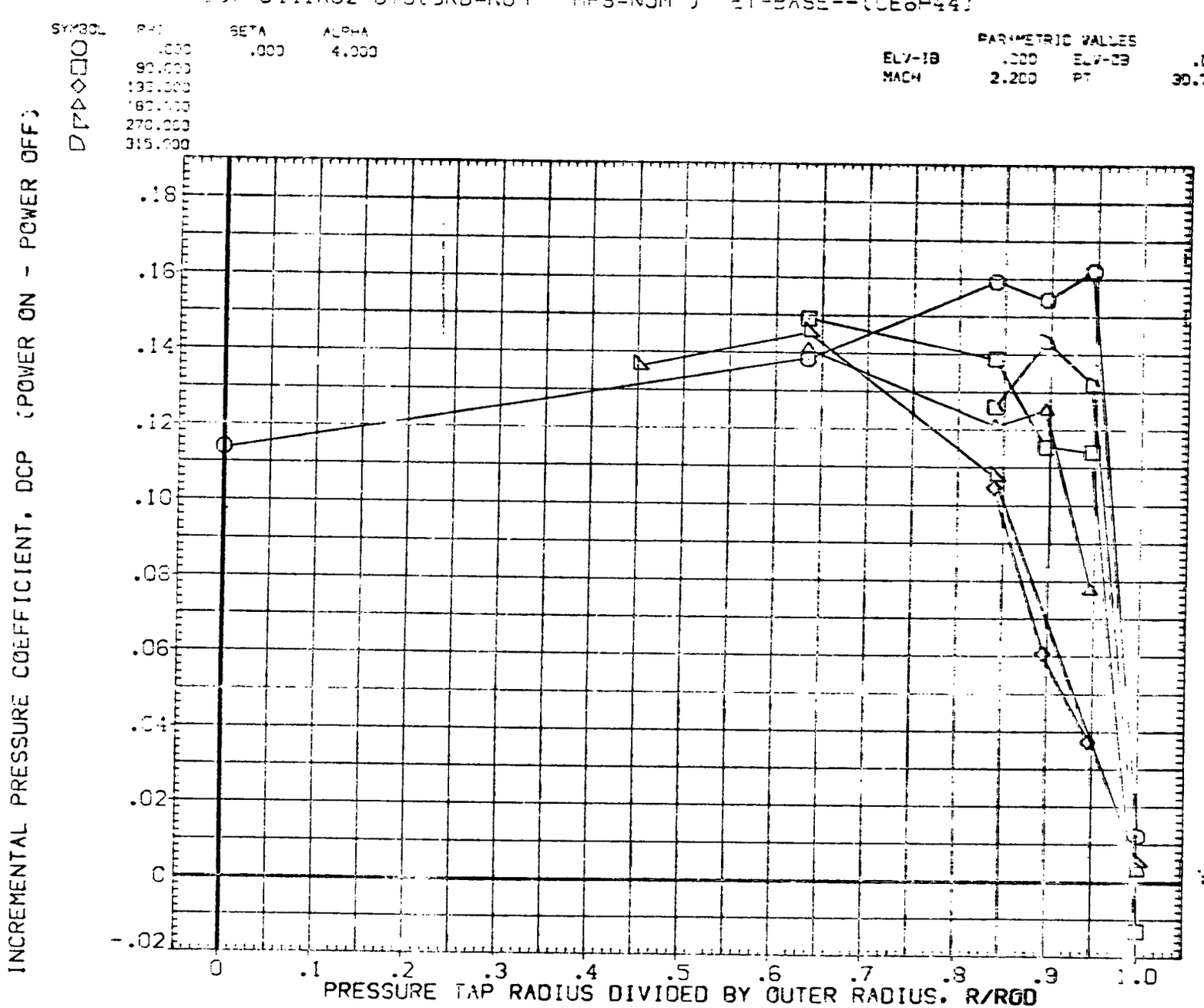


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

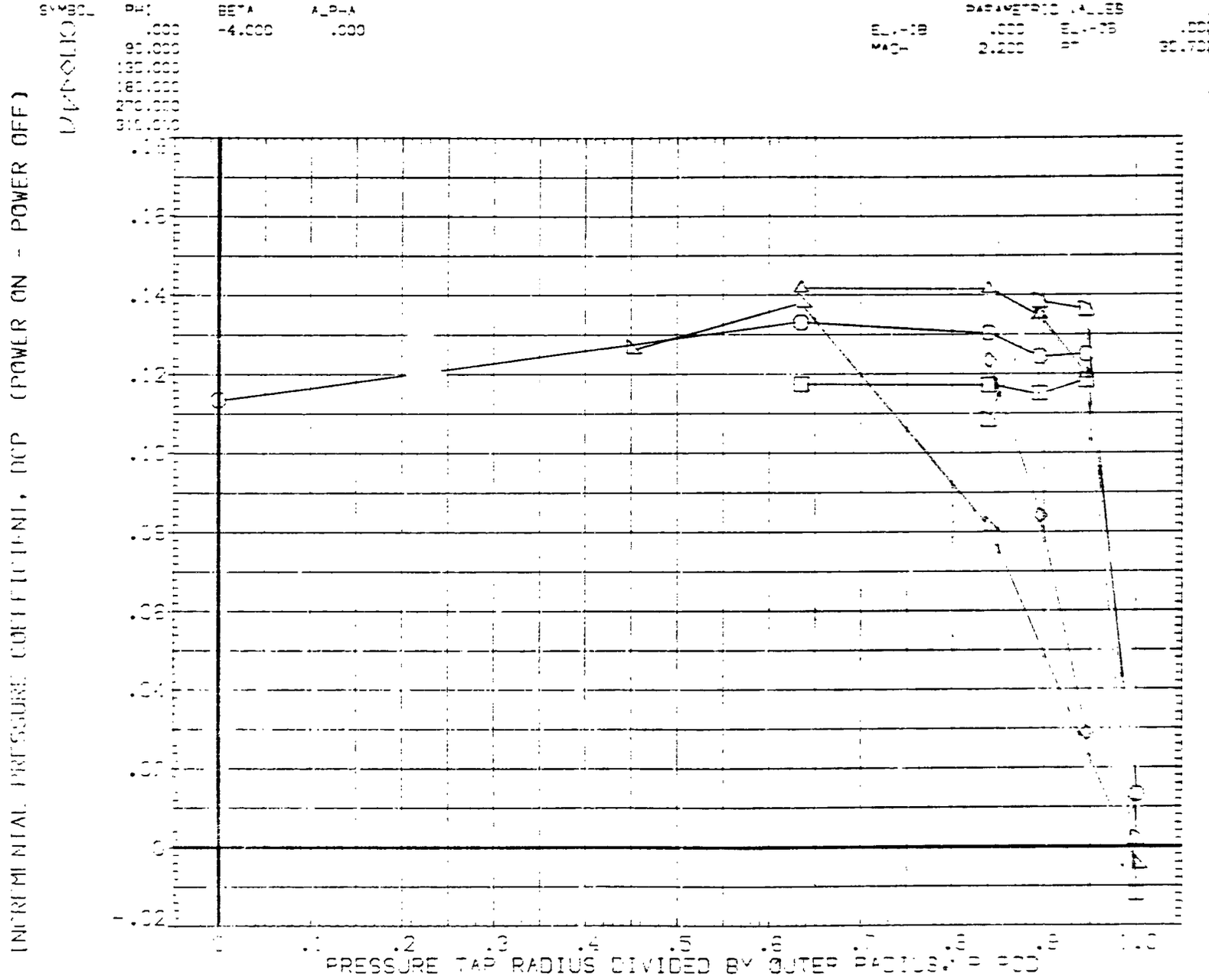


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

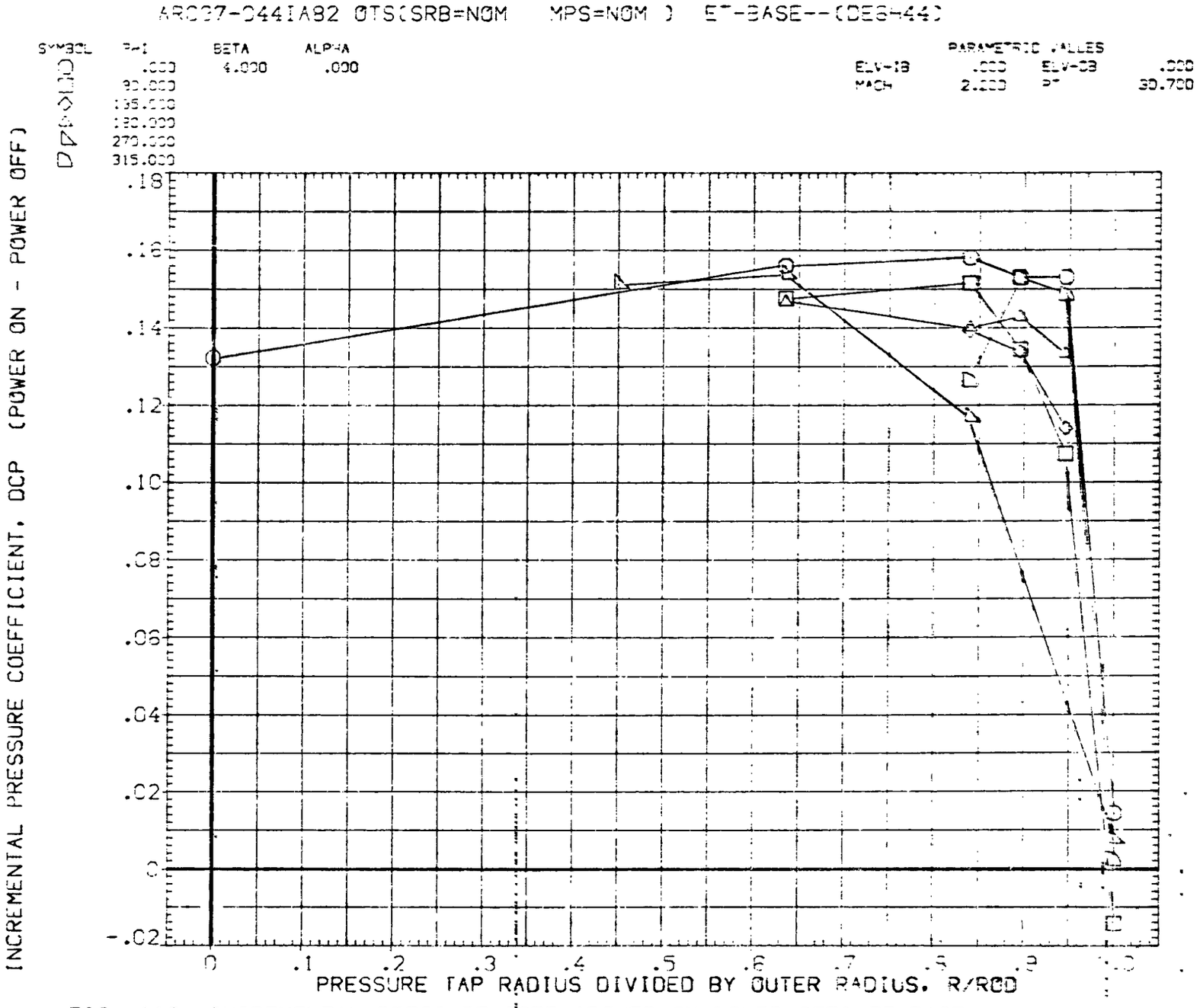


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

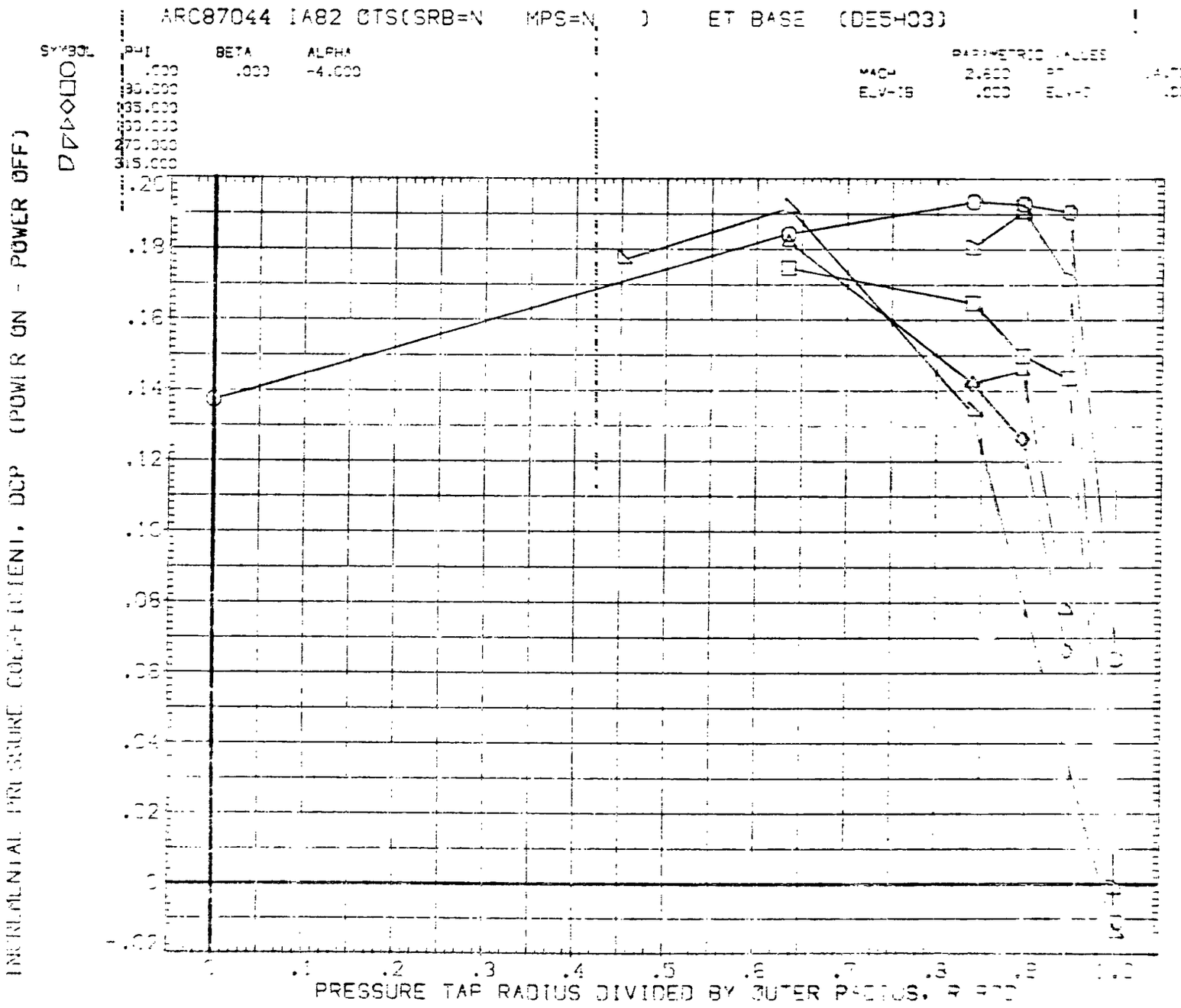


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

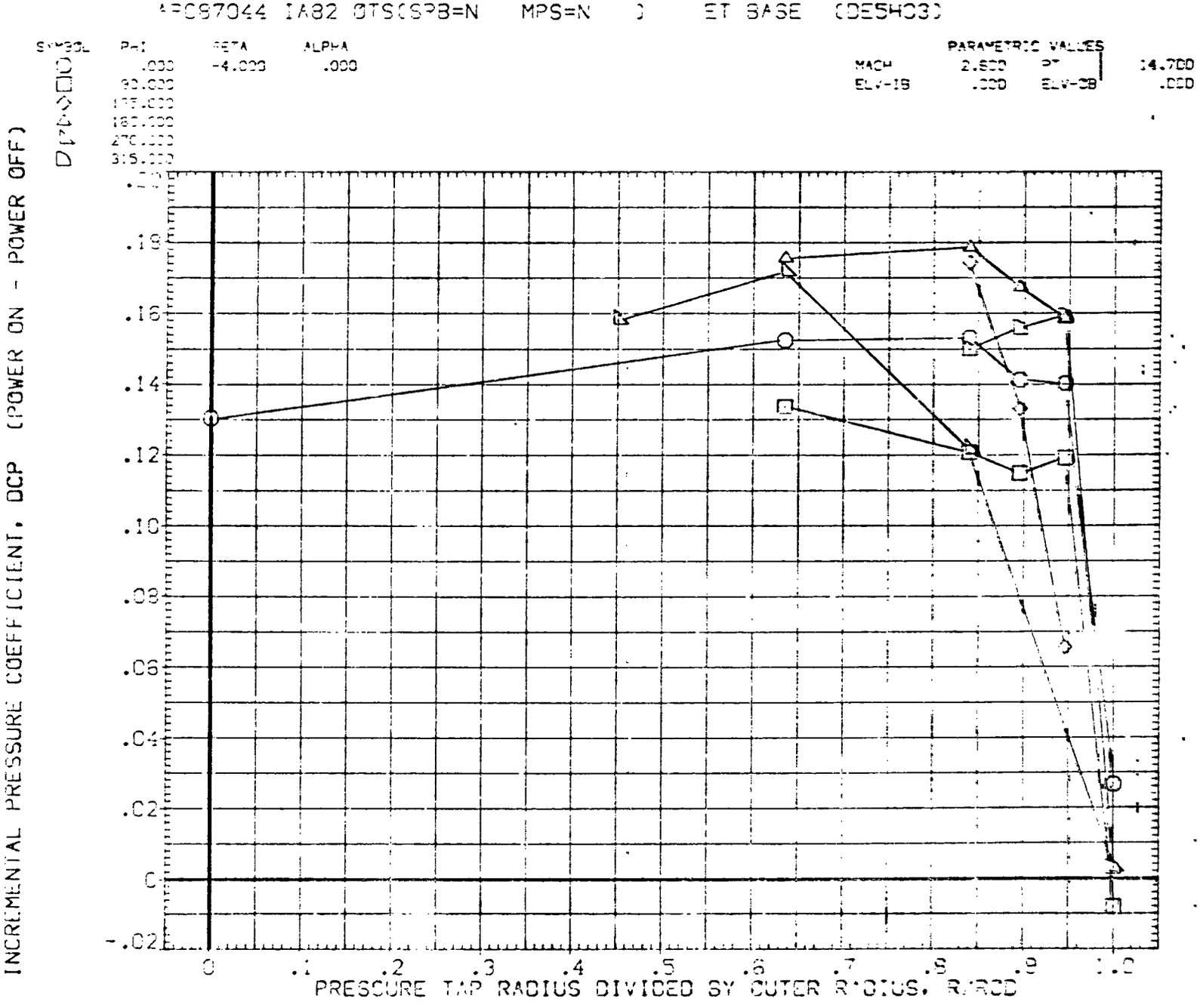


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

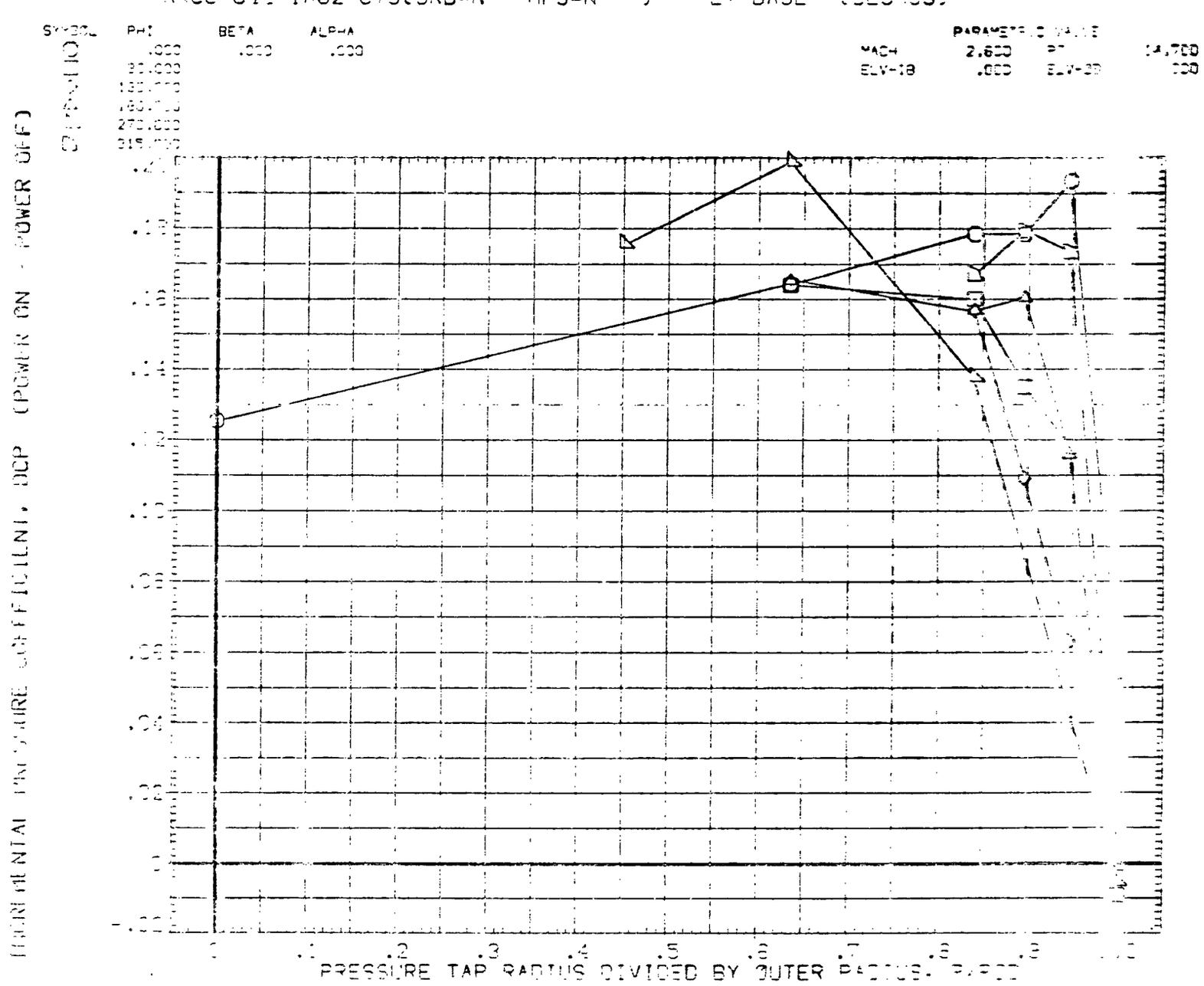


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

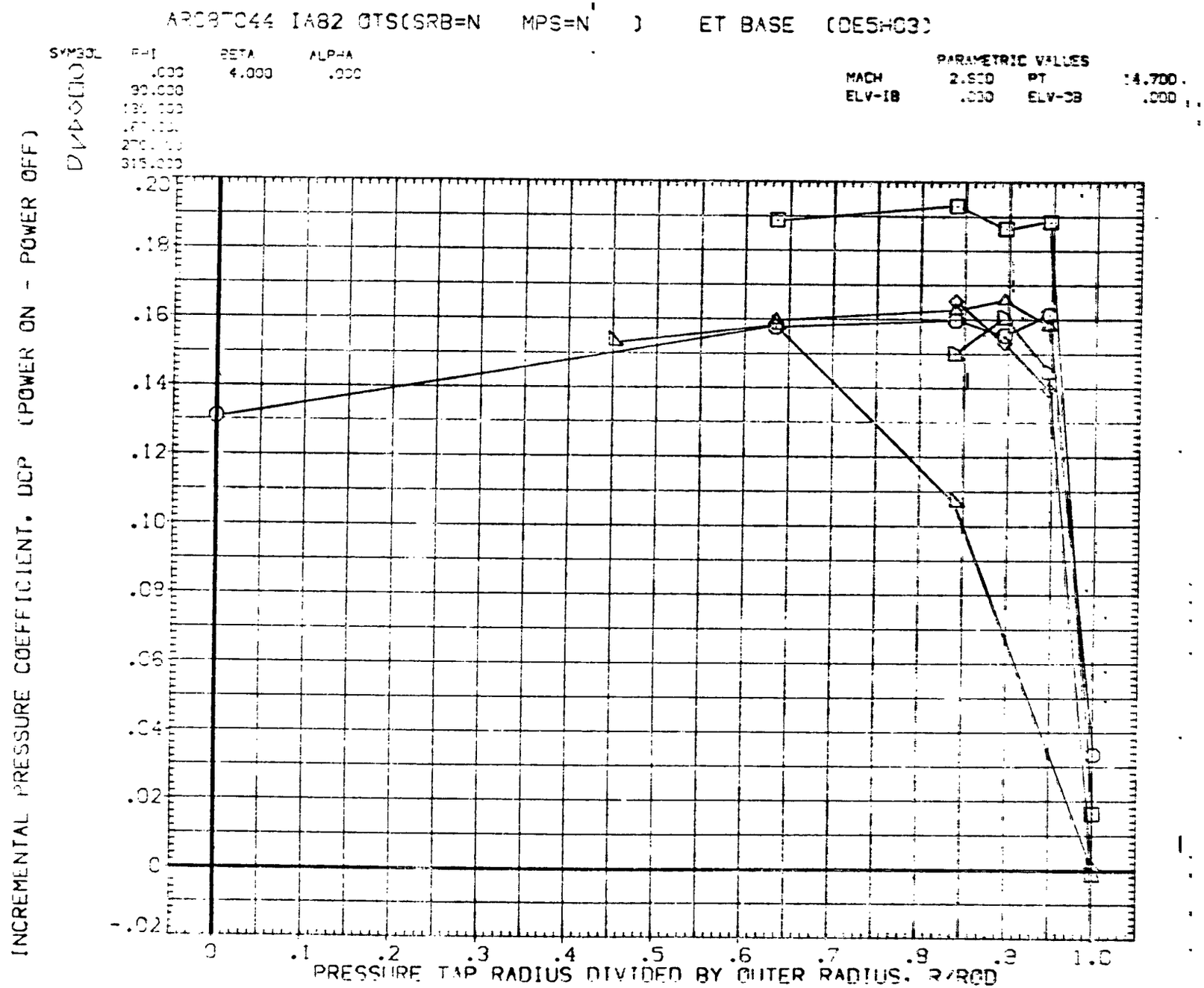


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

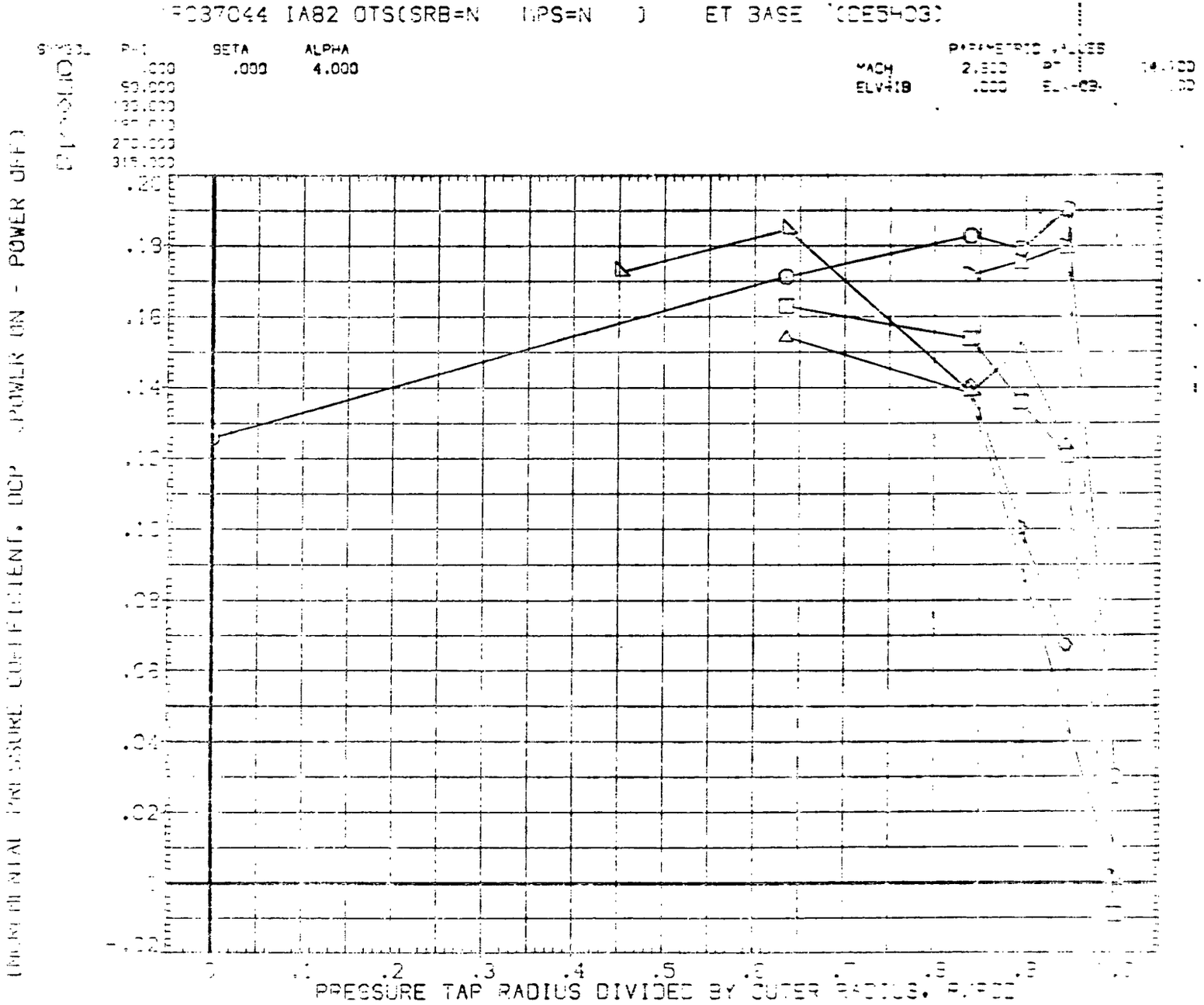


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

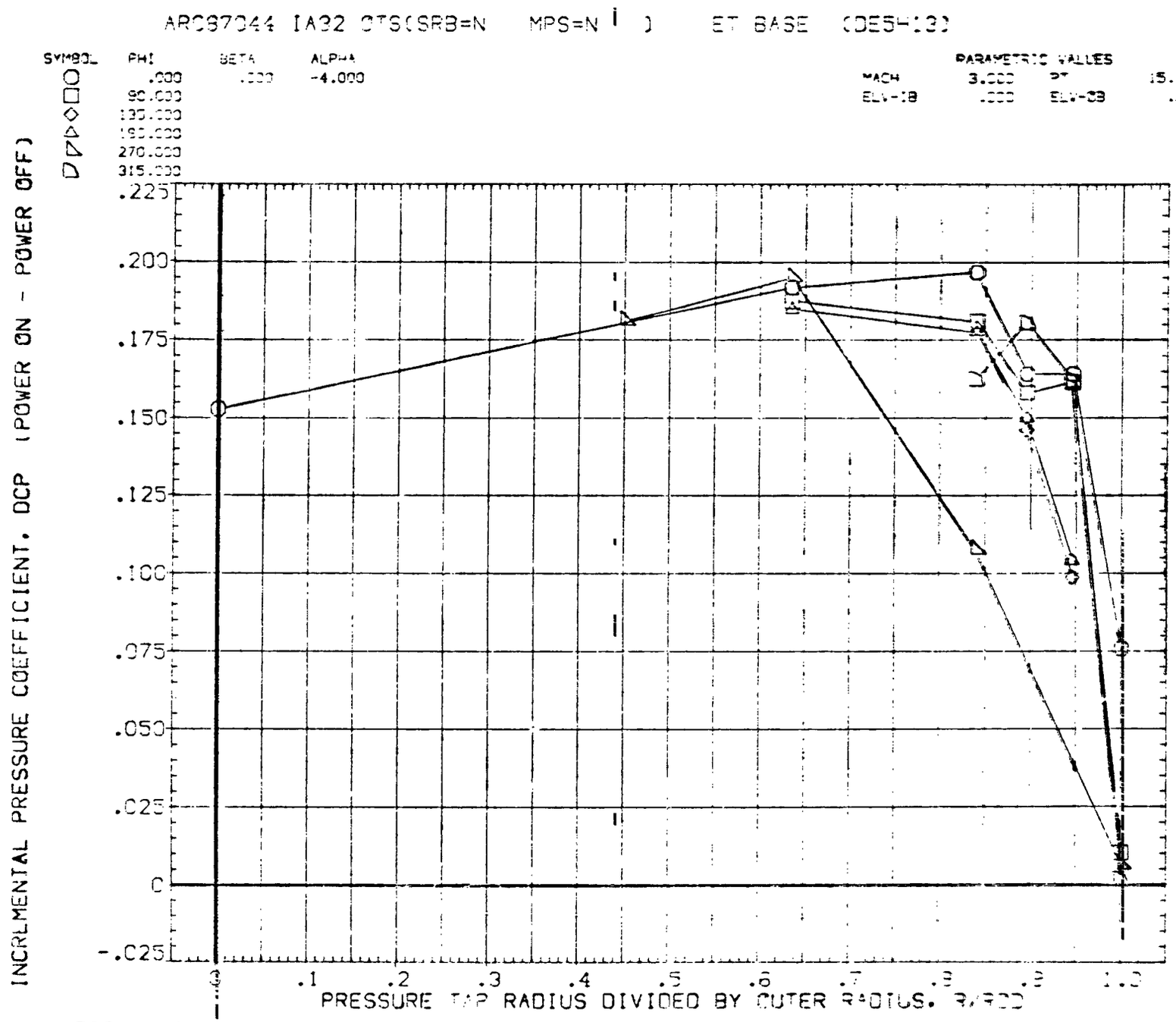


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

DIFFERENTIAL PRESSURE (DELTA P) DUE TO POWER ON - POWER OFF

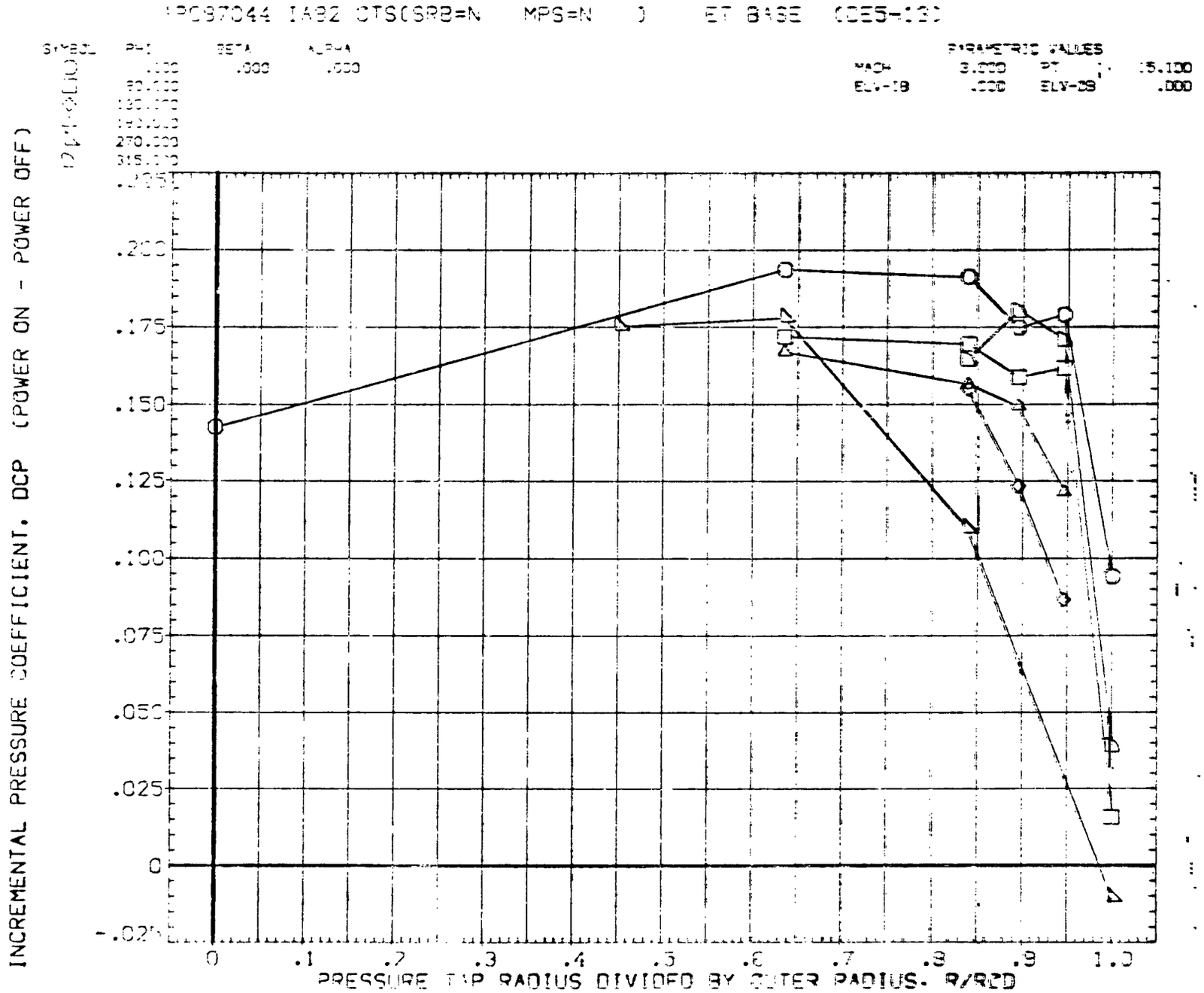


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

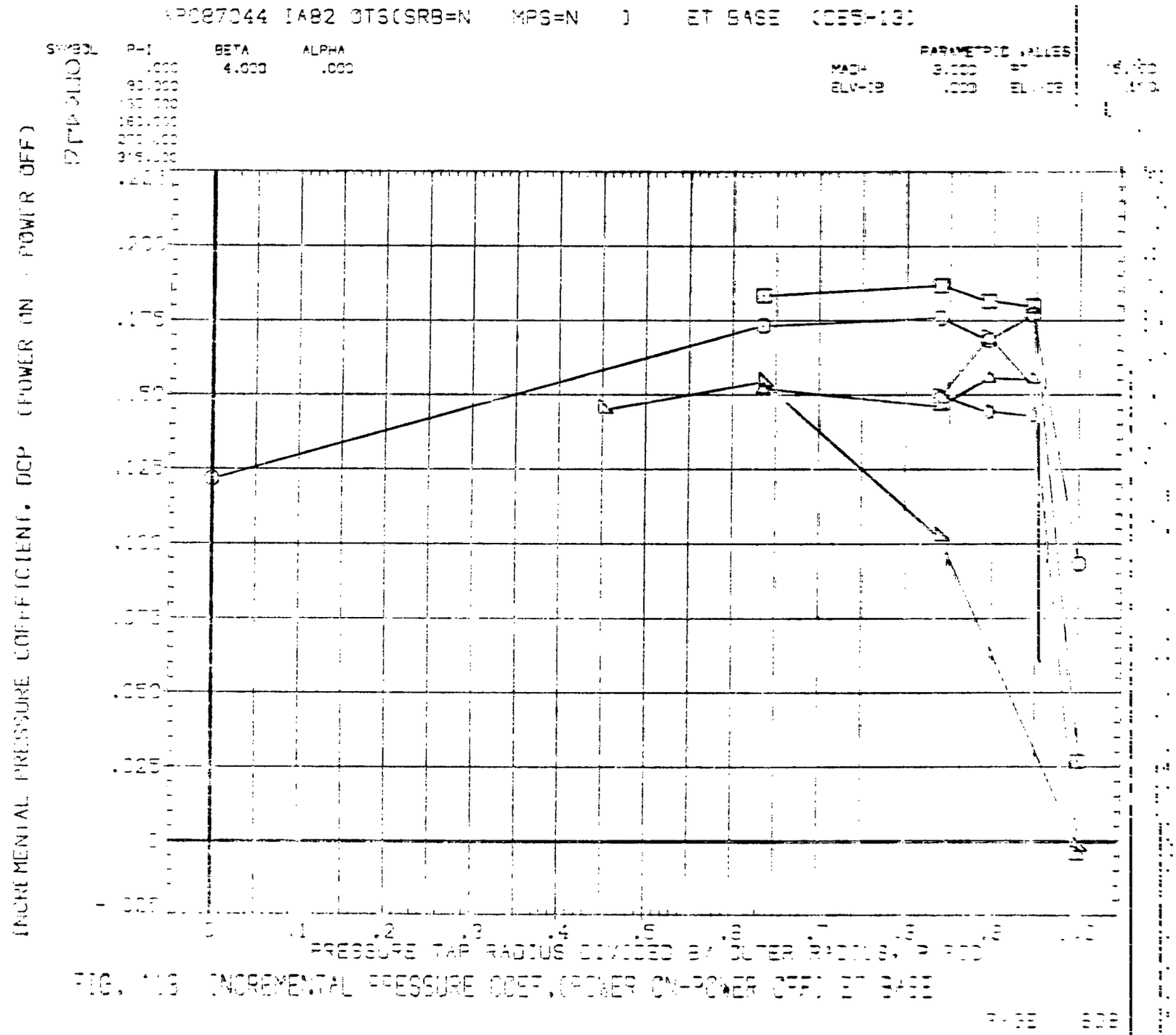


FIG. 118 INCREMENTAL PRESSURE COEF.,(POWER ON-POWER OFF) ET BASE

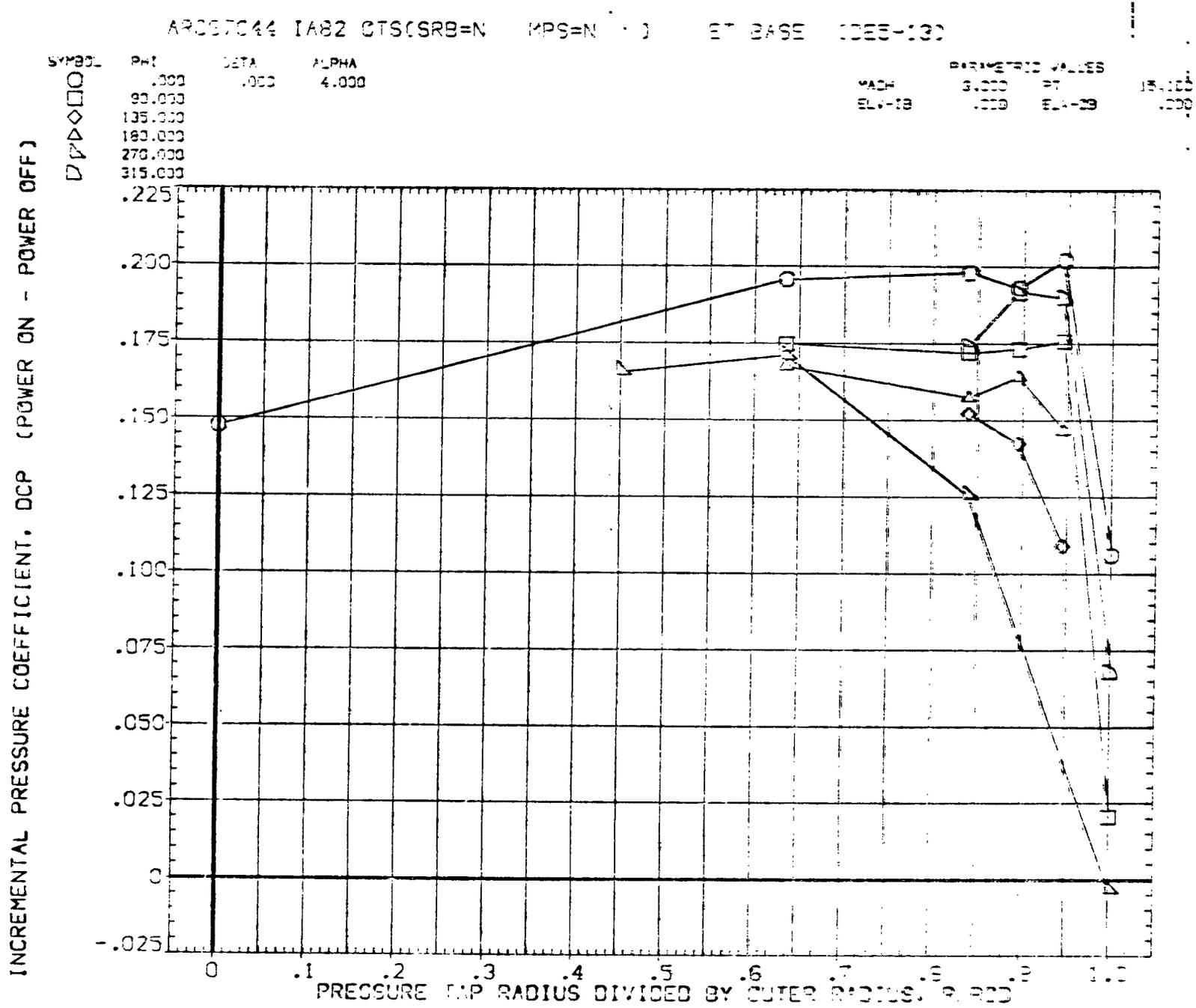


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

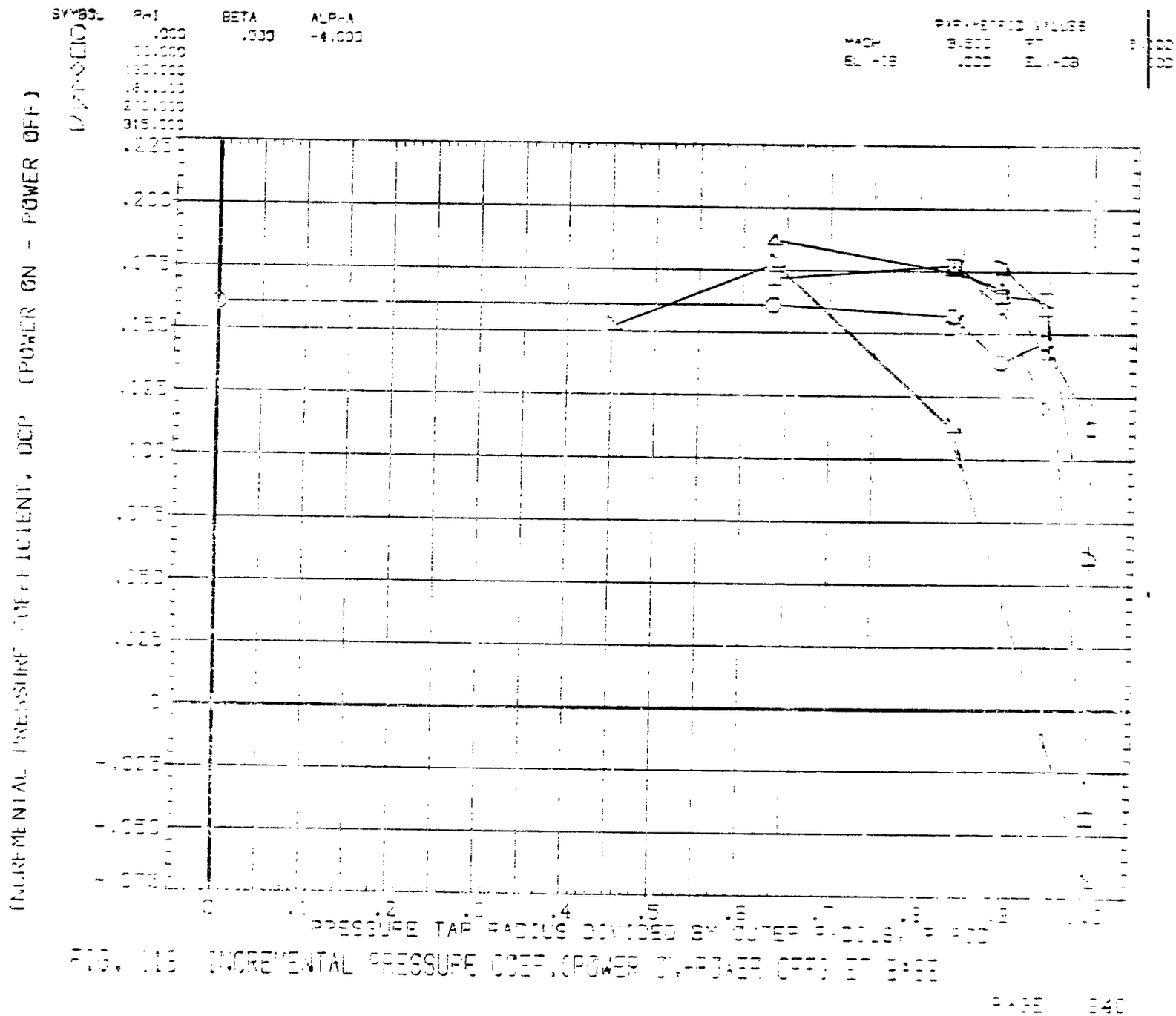


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

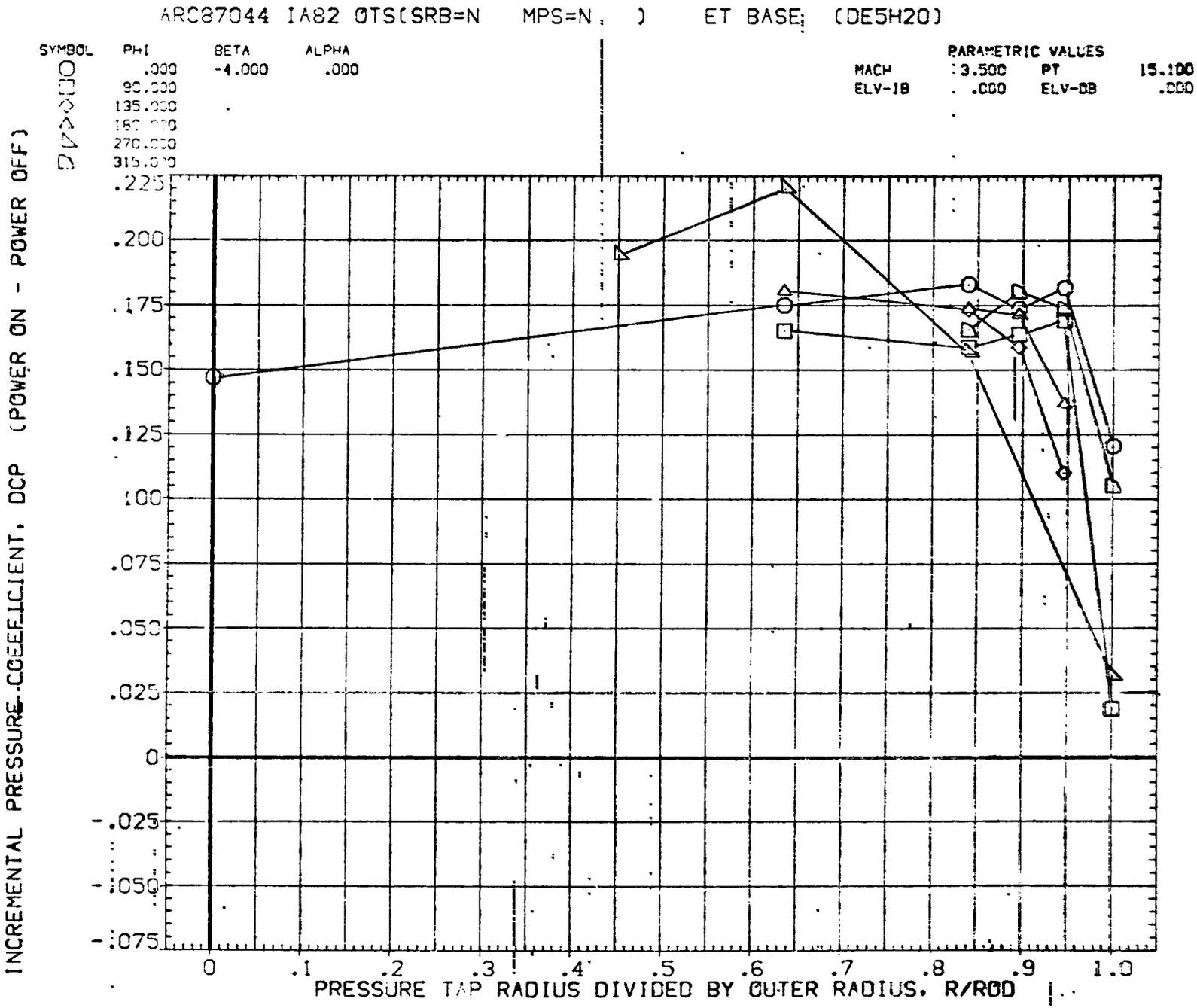


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

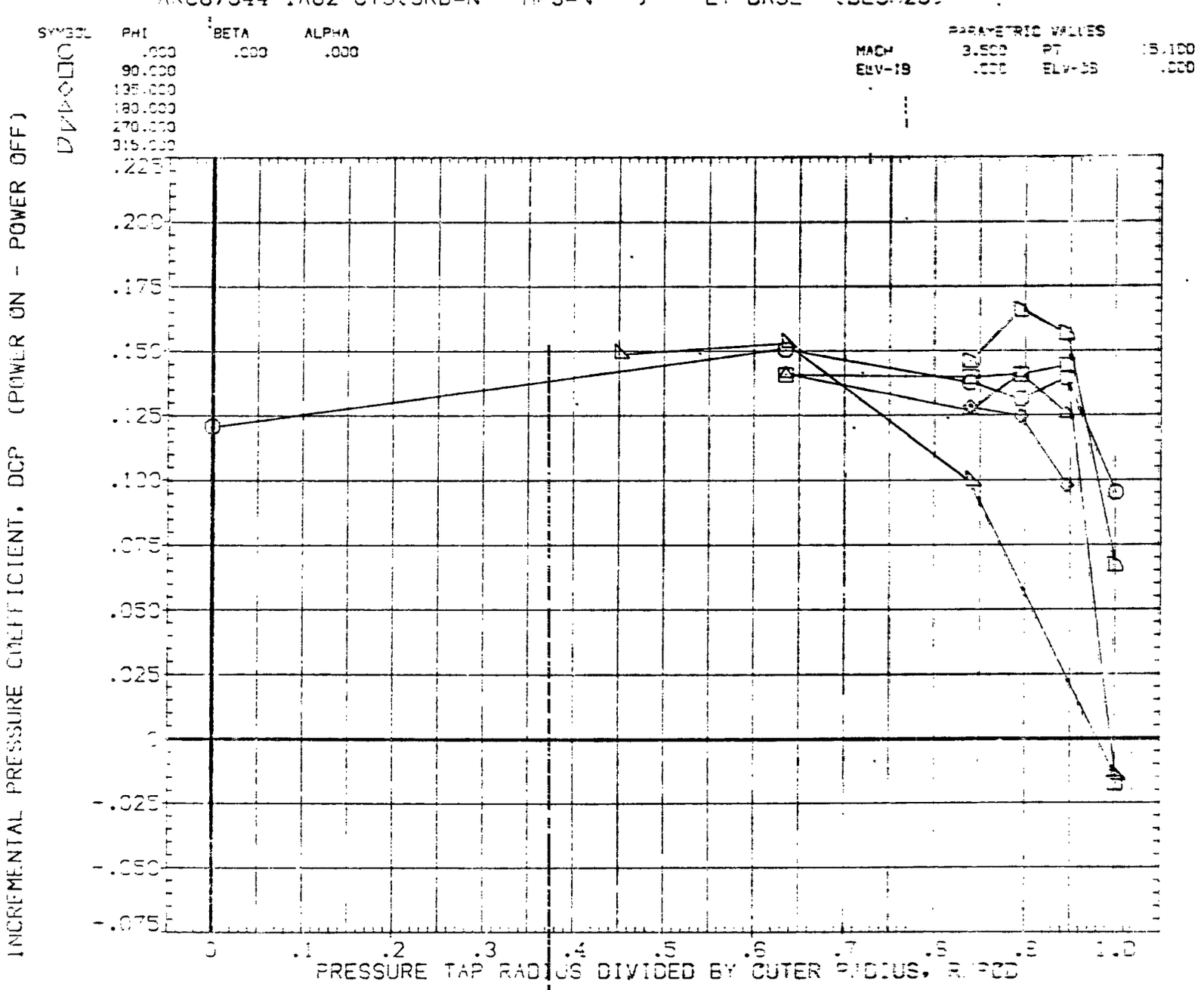


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

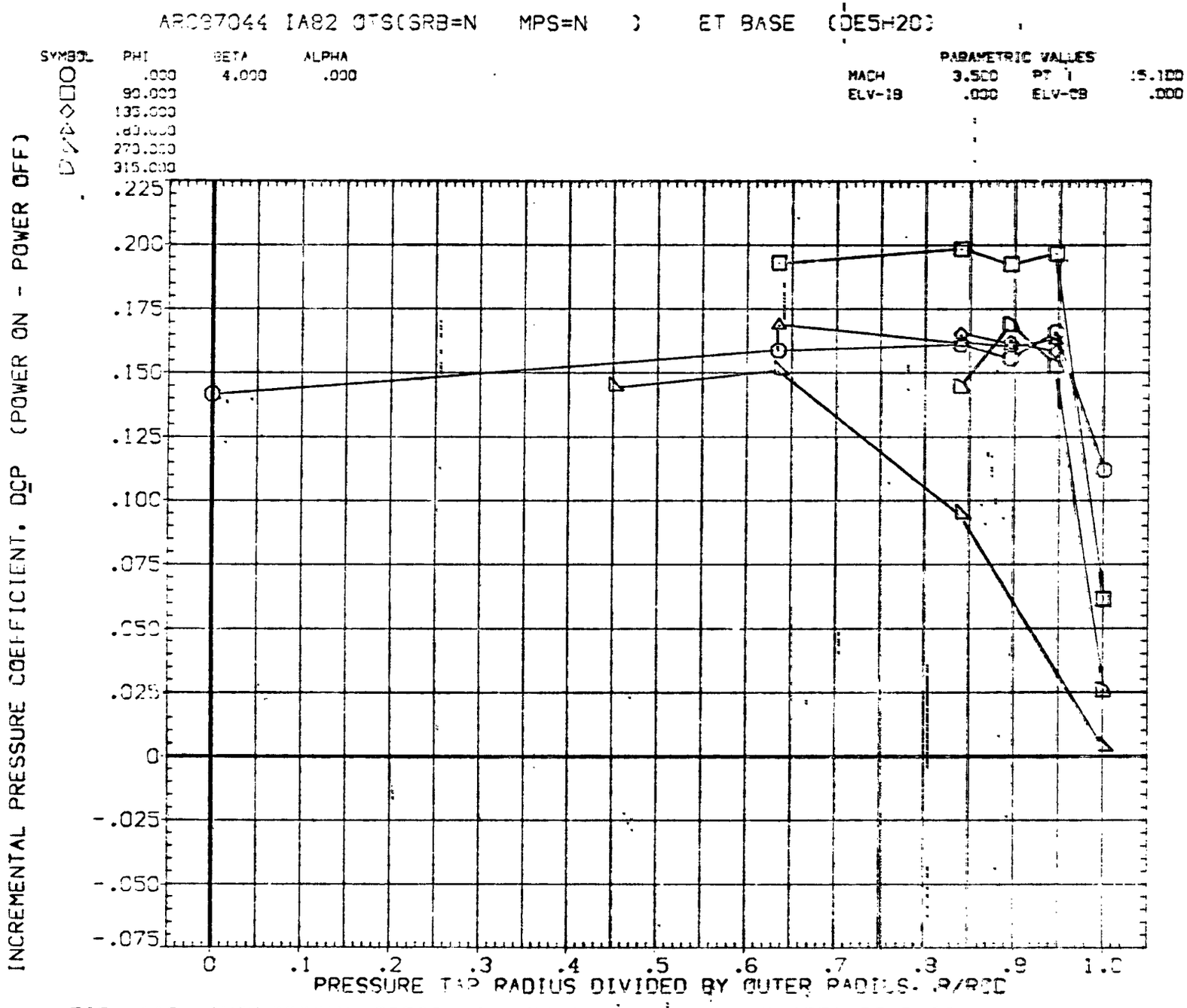


FIG. 118. INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

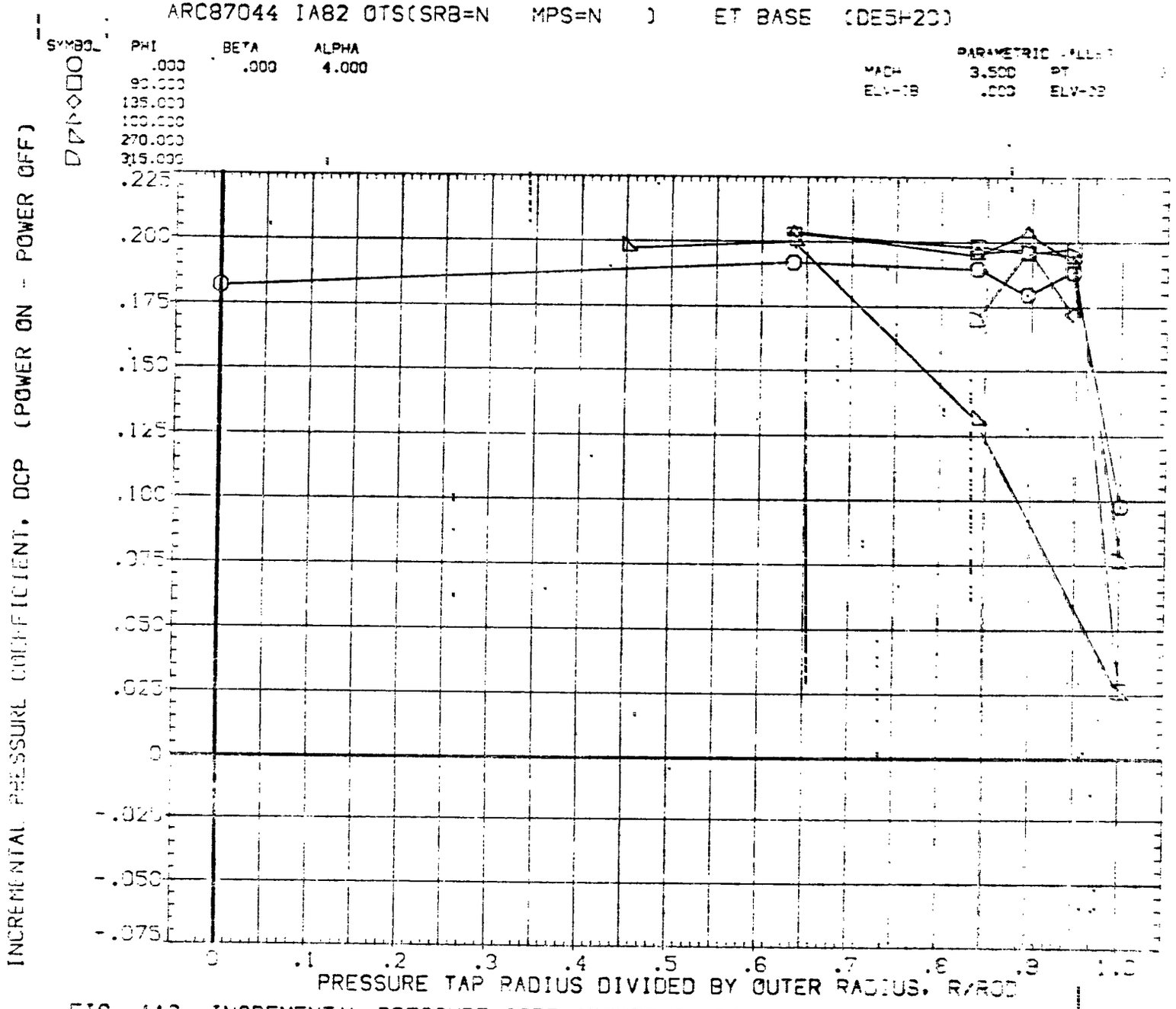


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

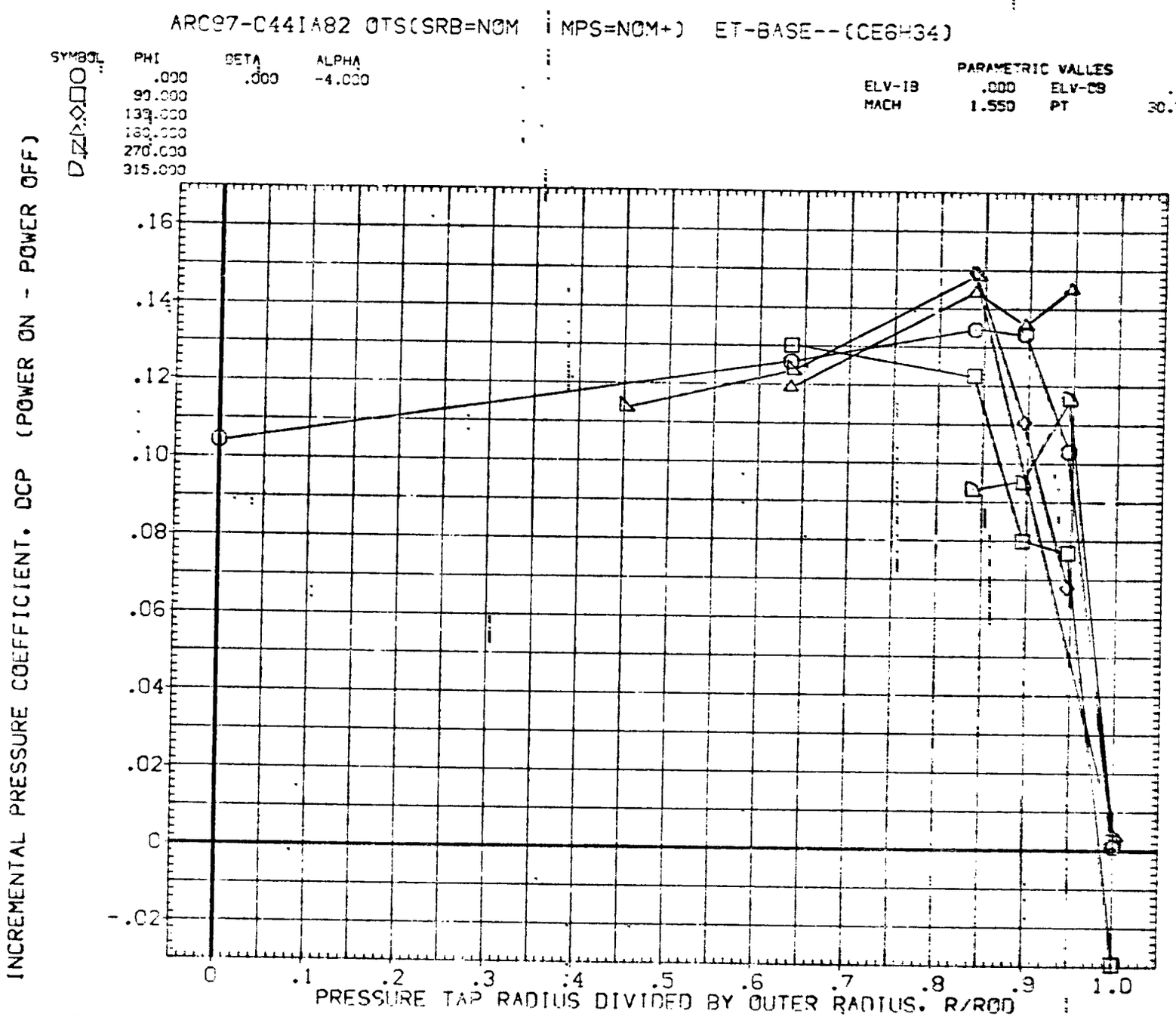


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

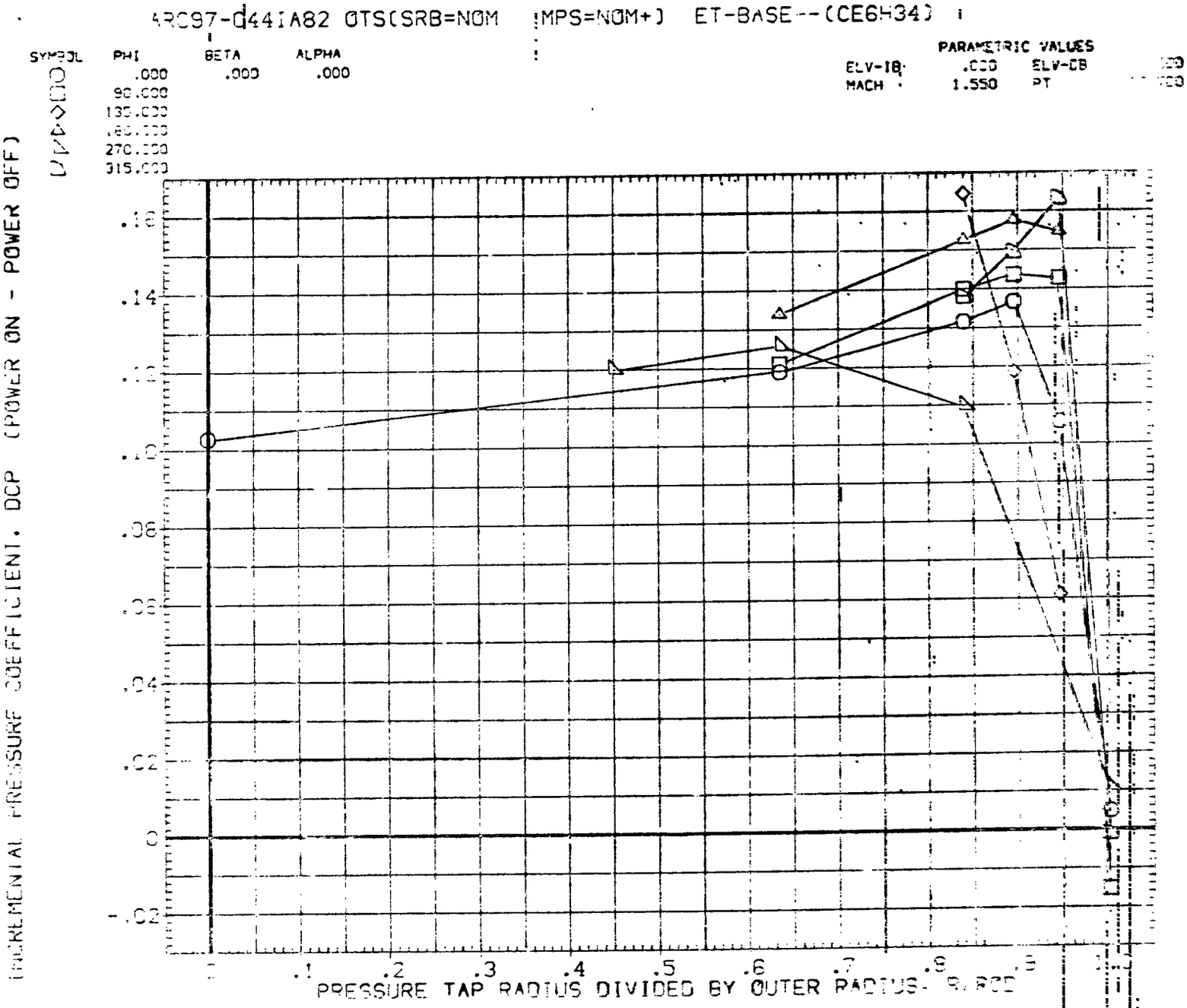


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

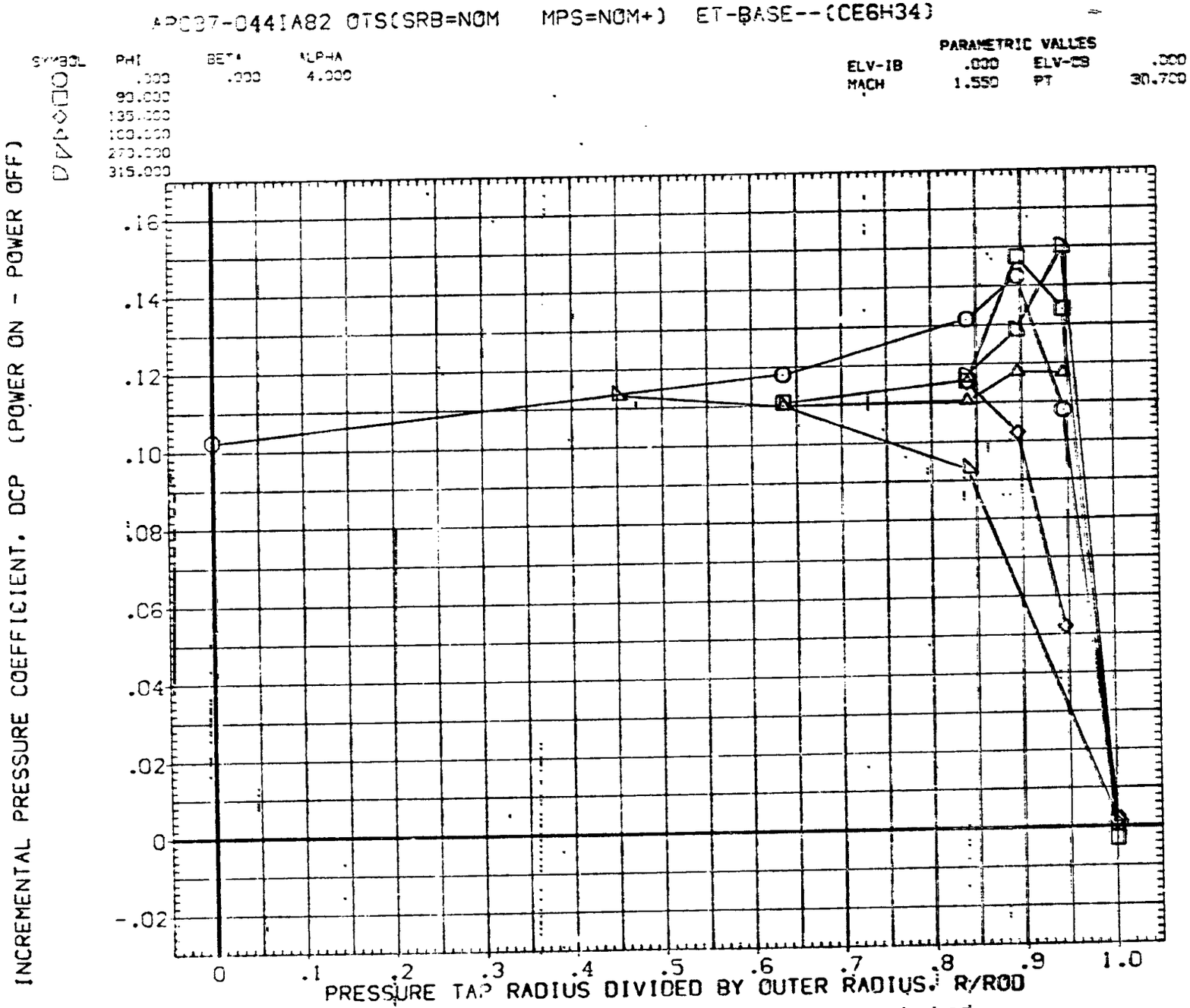


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

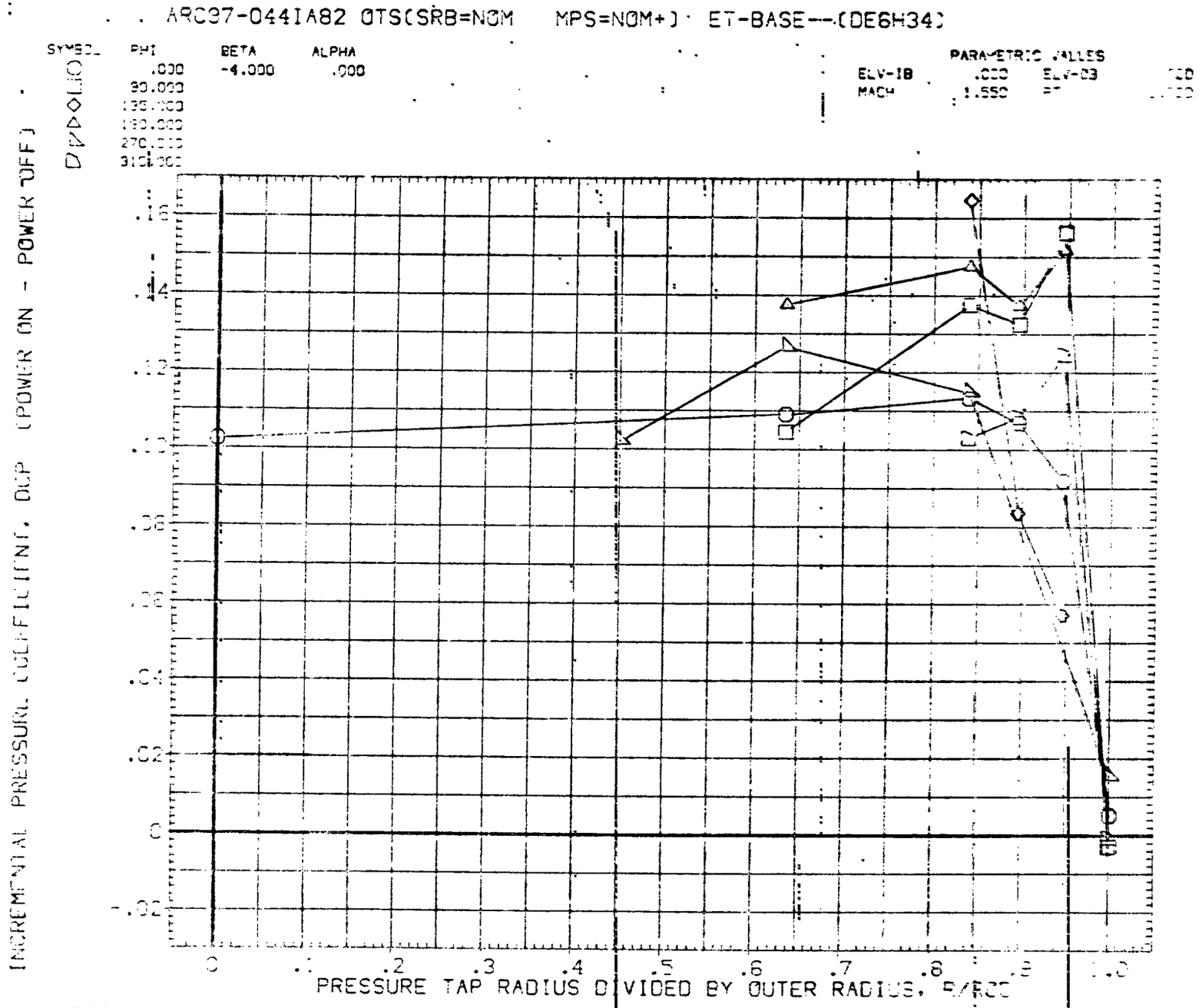


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

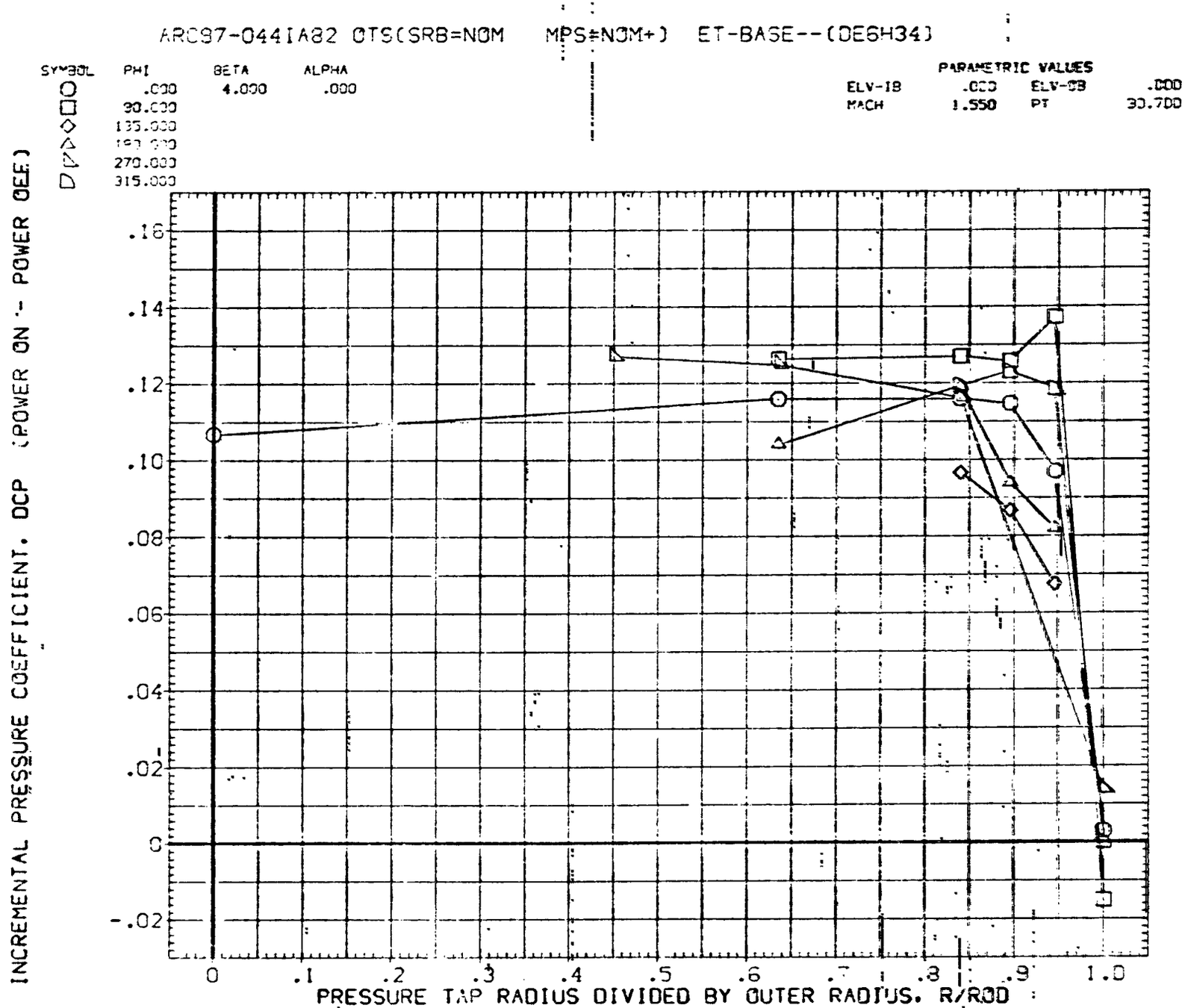


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

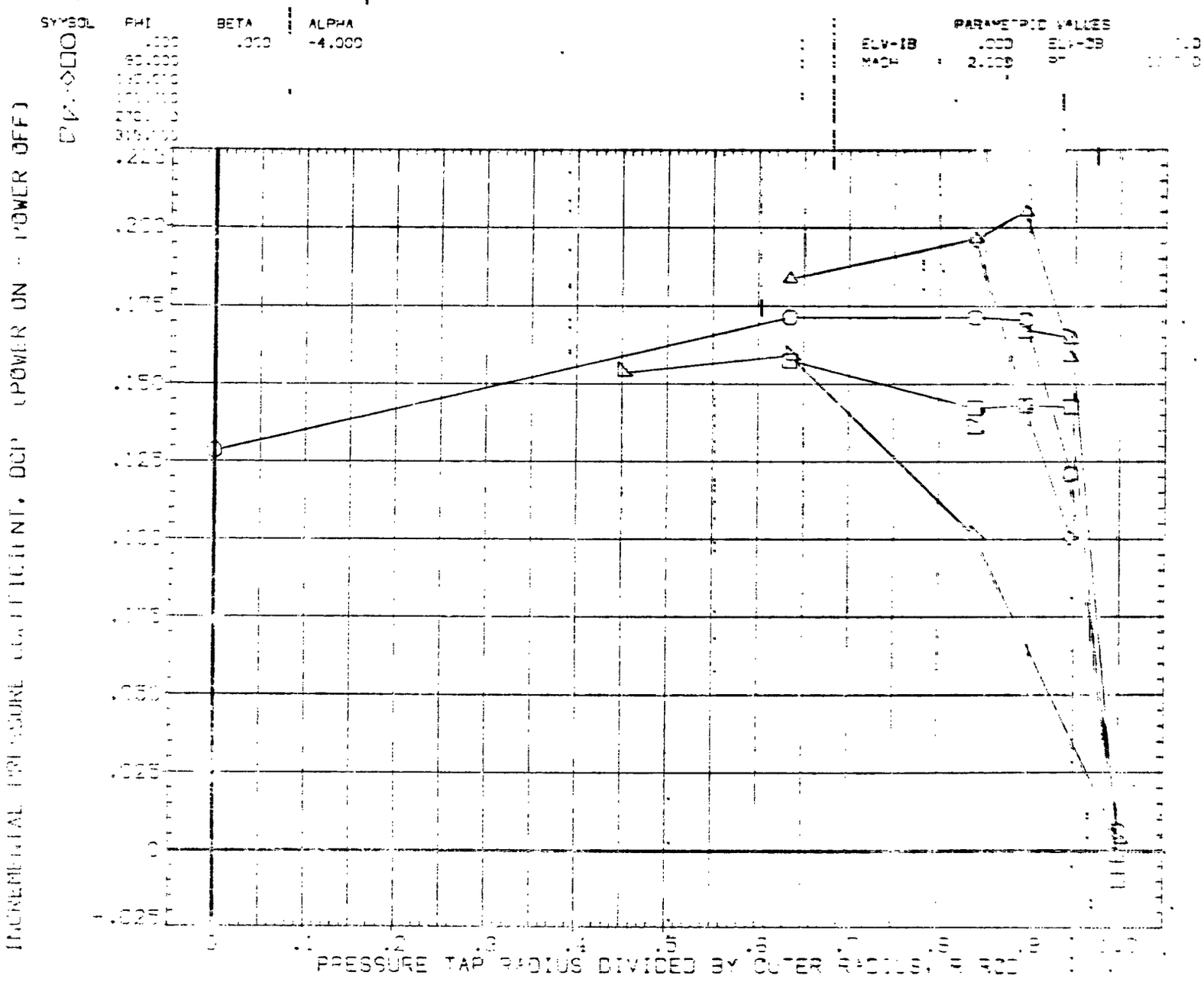


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

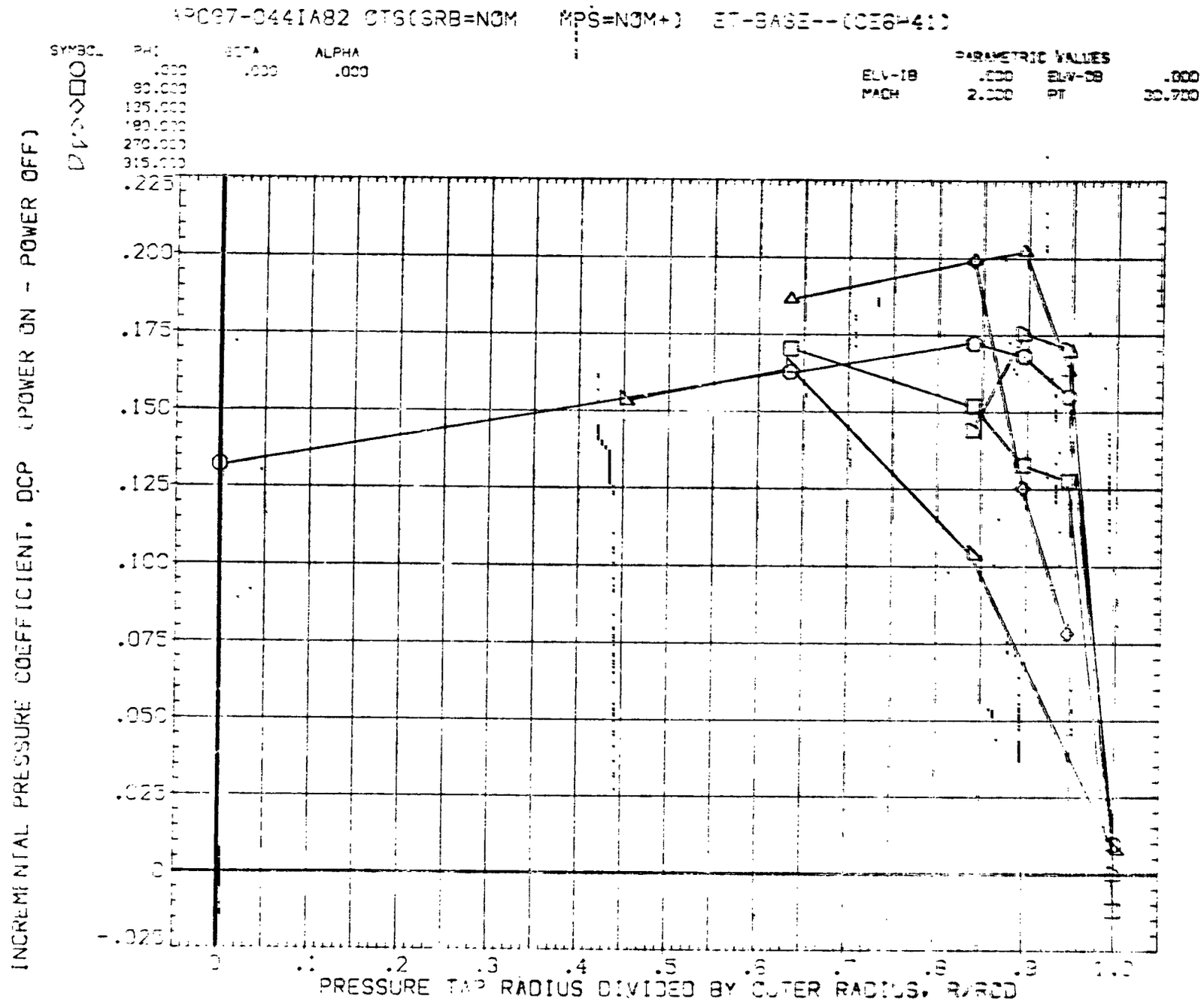


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

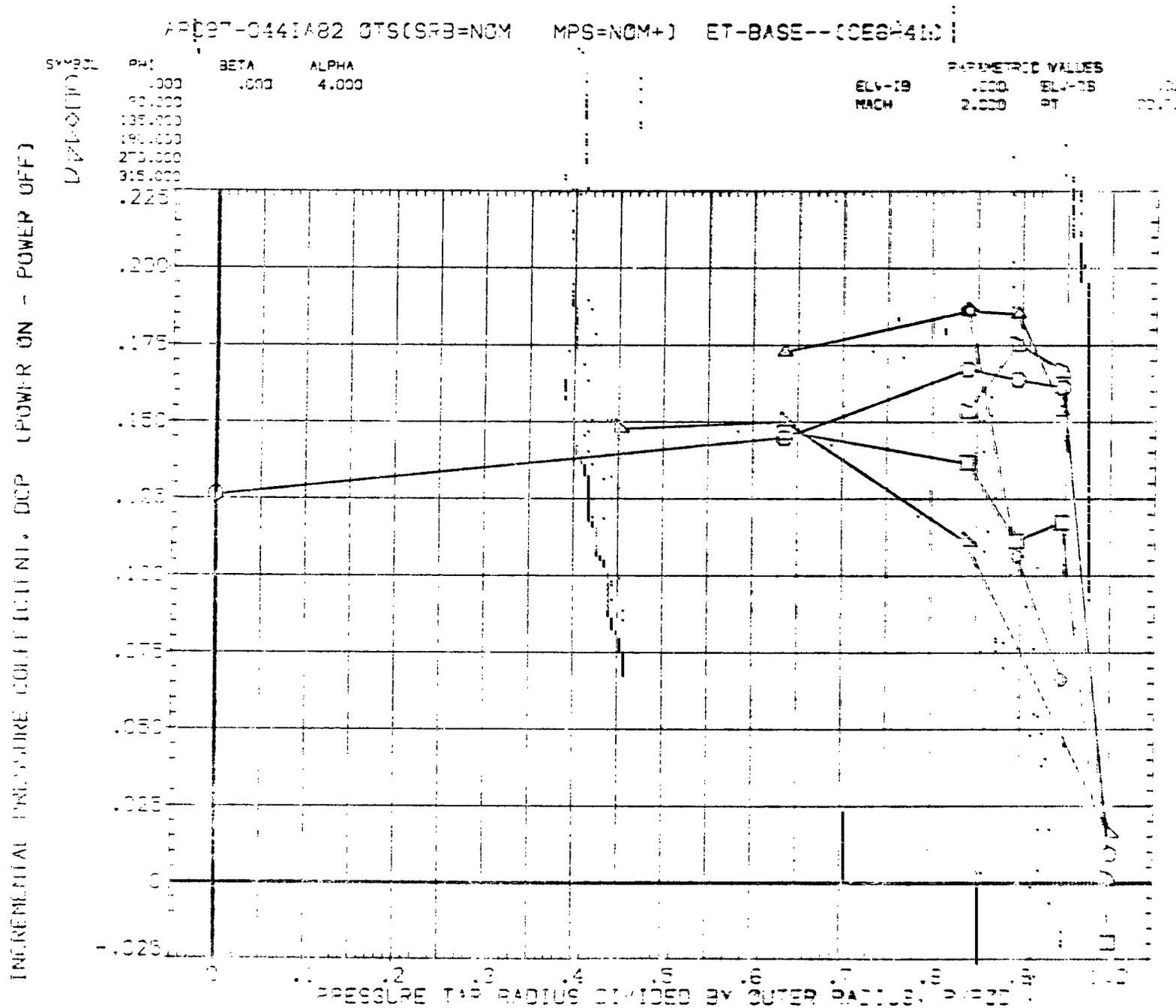


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

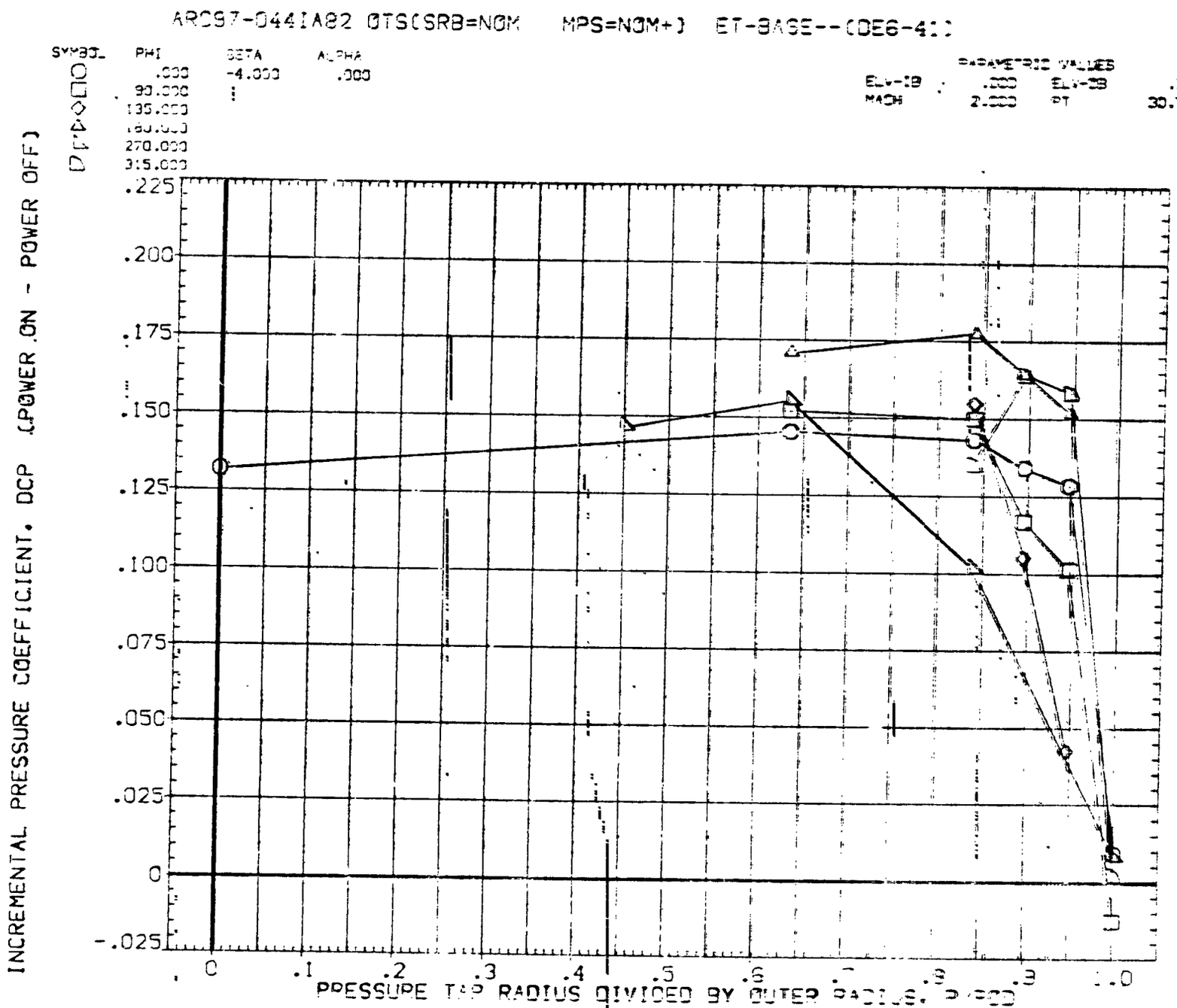


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

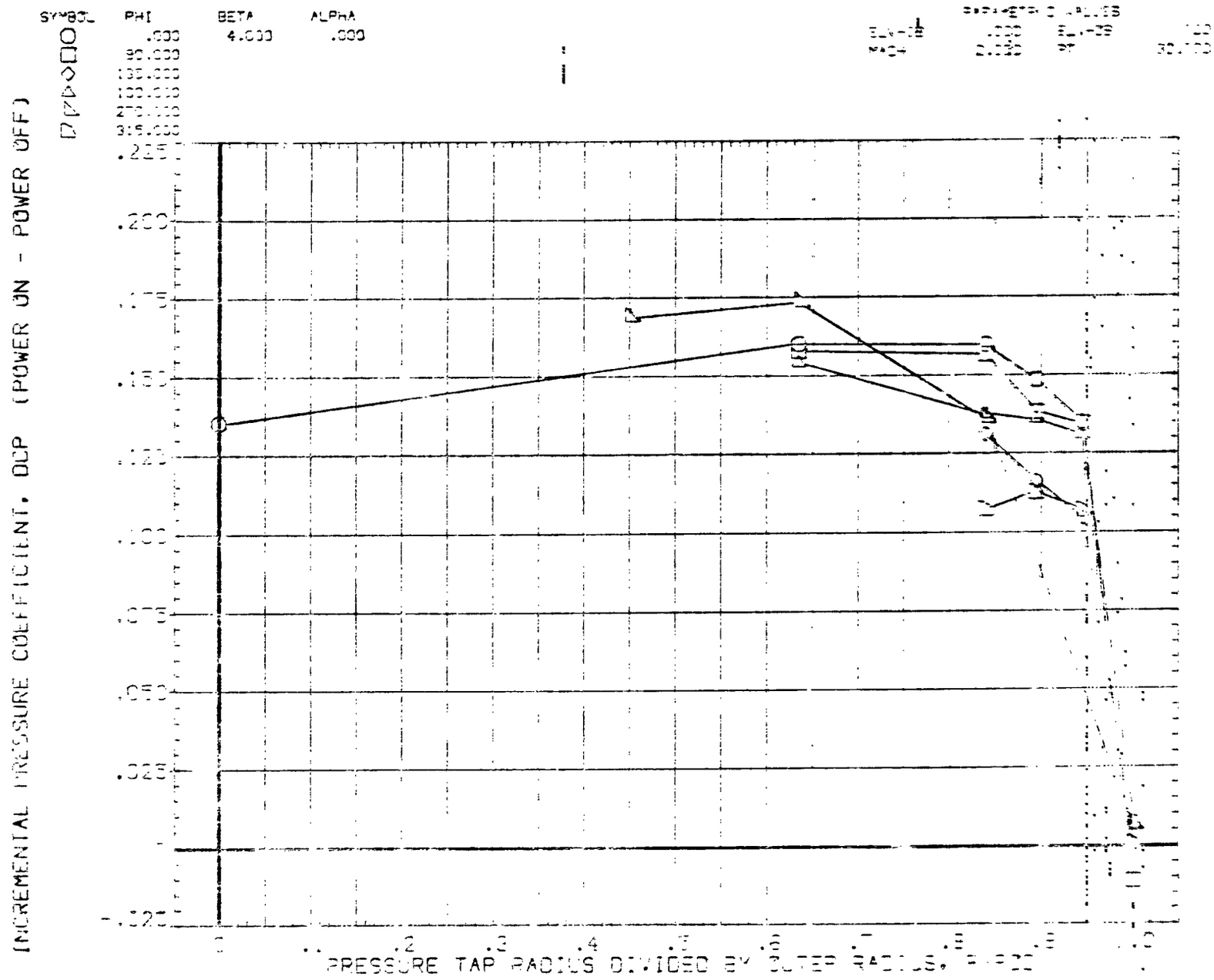


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

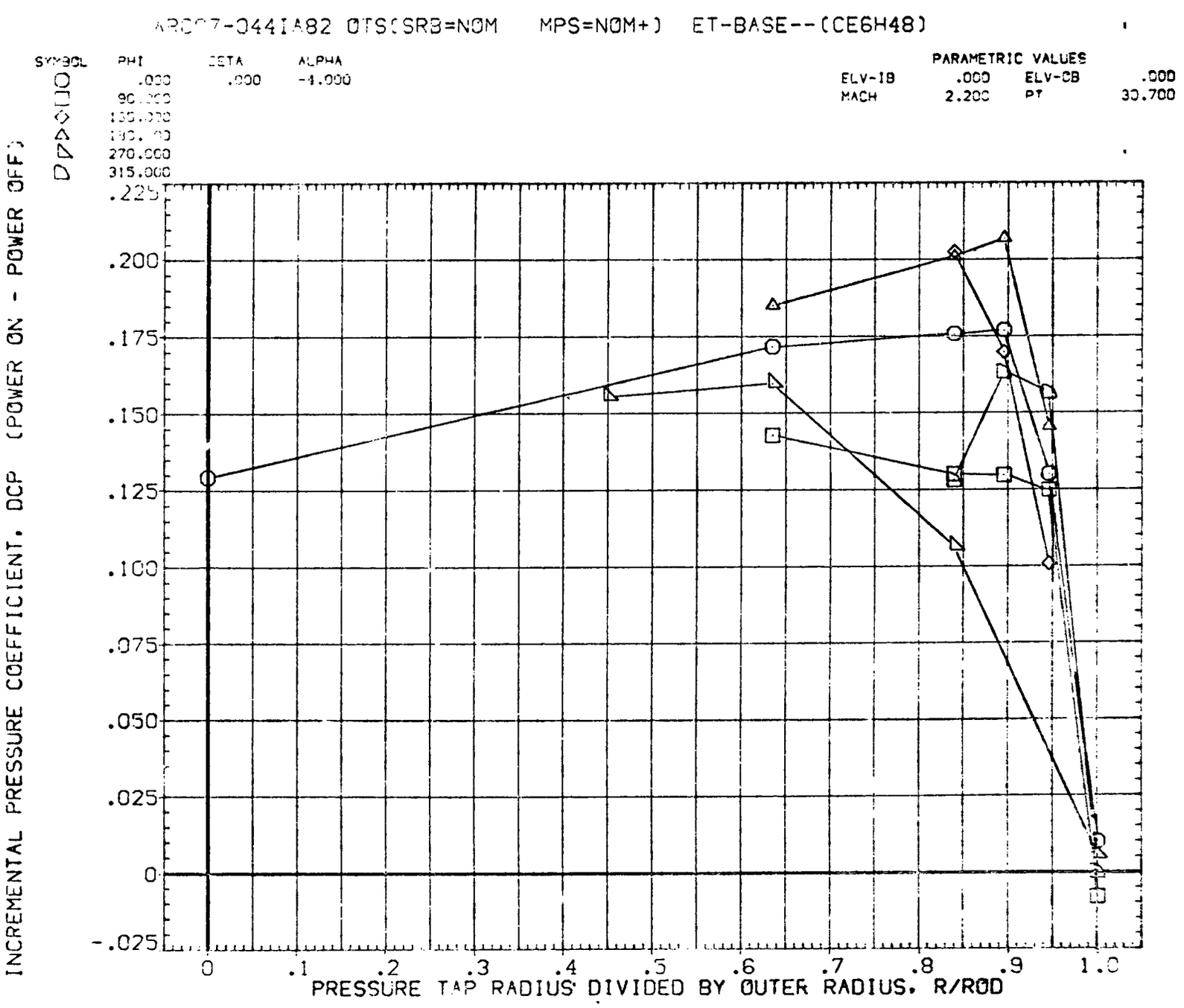


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

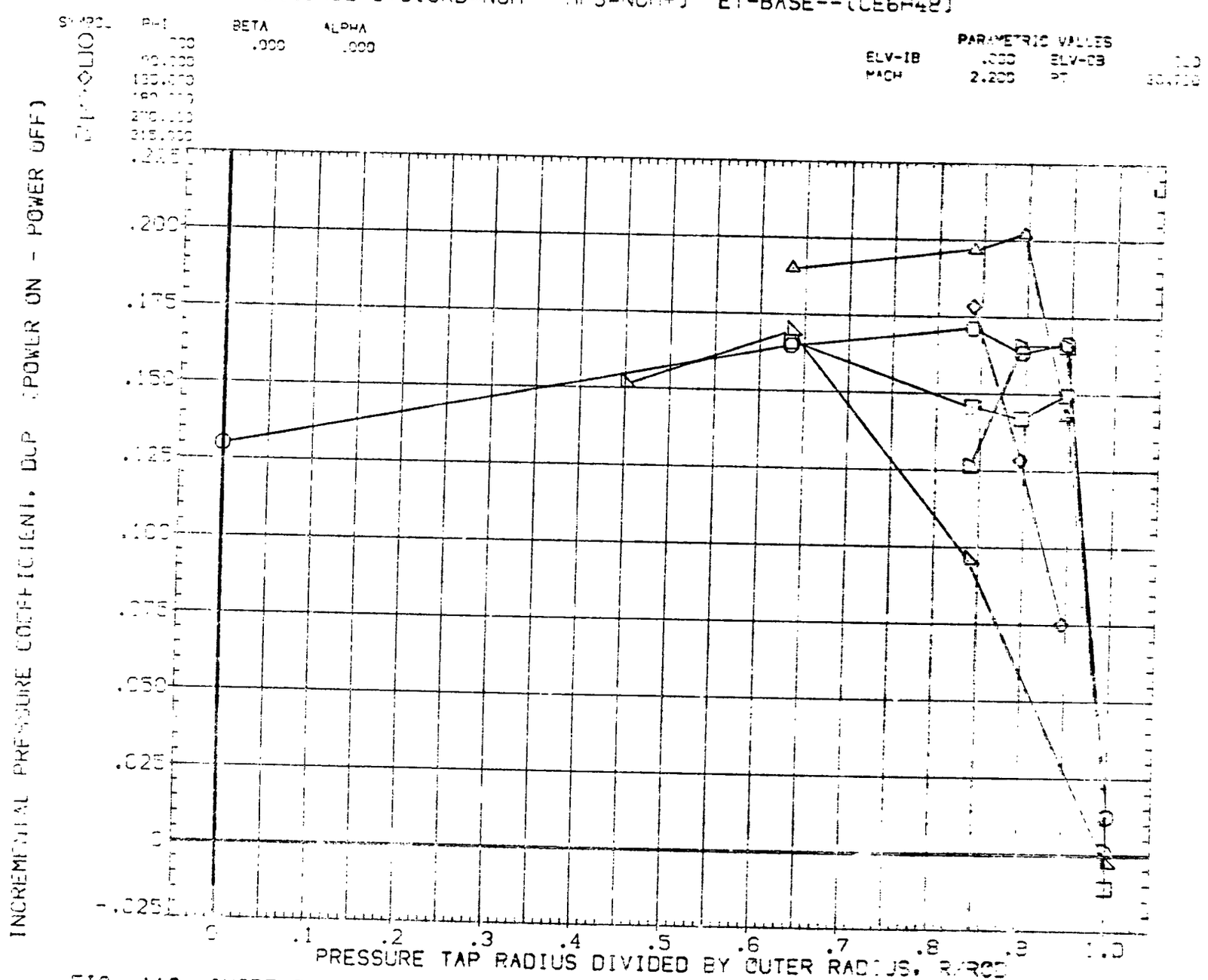


FIG. 118 INCREMENTAL PRESSURE COFF.(POWER ON-POWER OFF) ET BASE

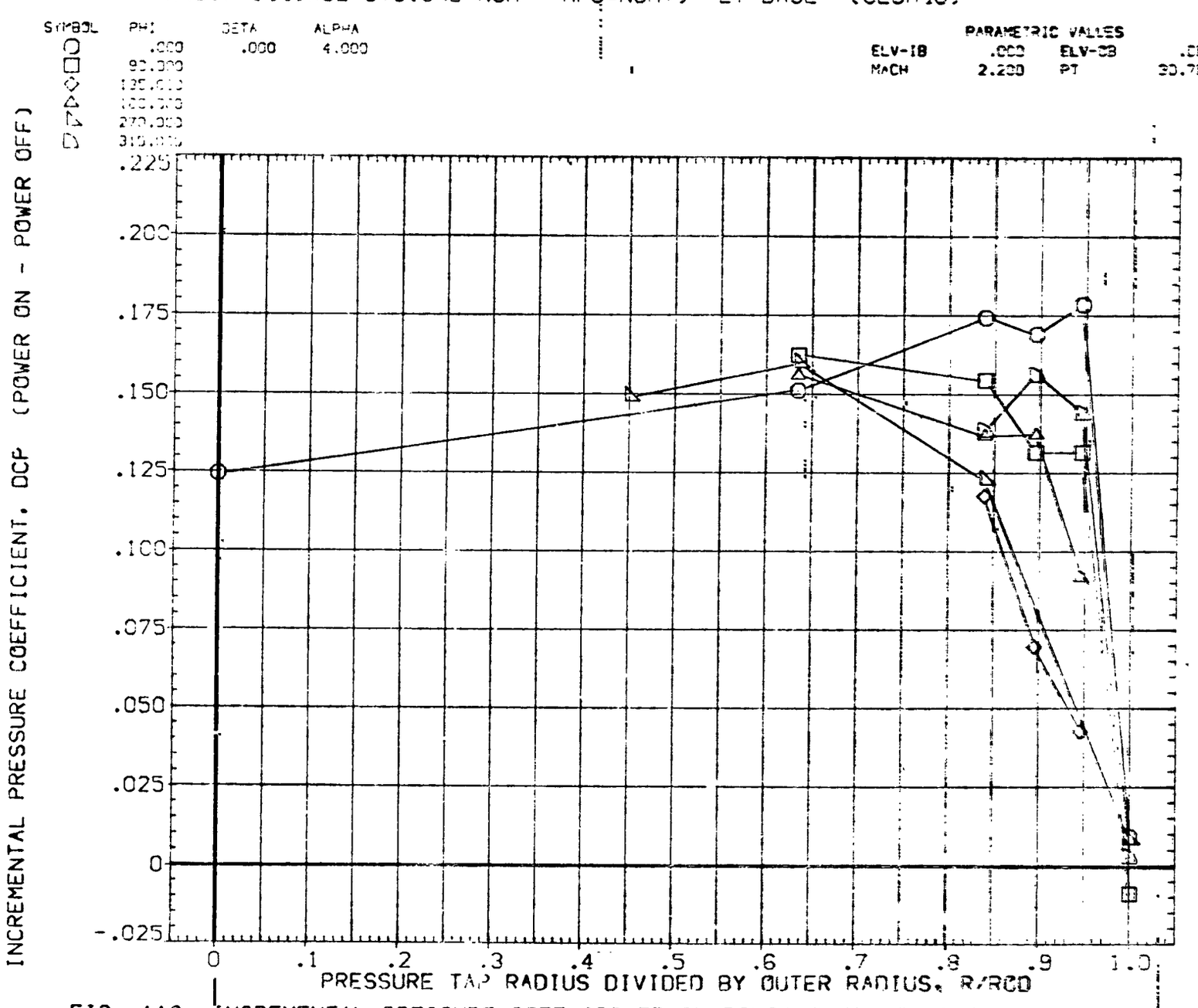


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

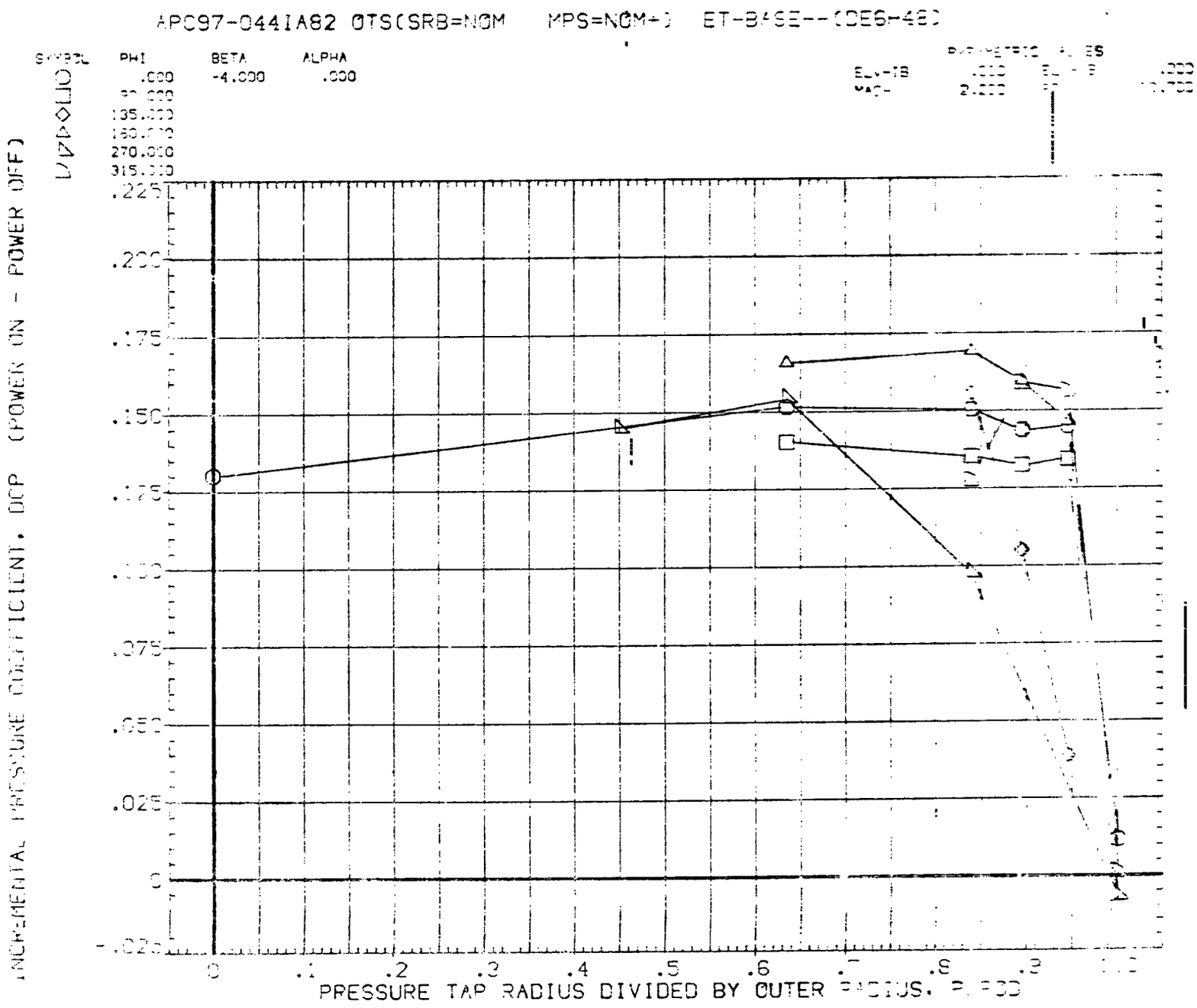


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

BASE 888

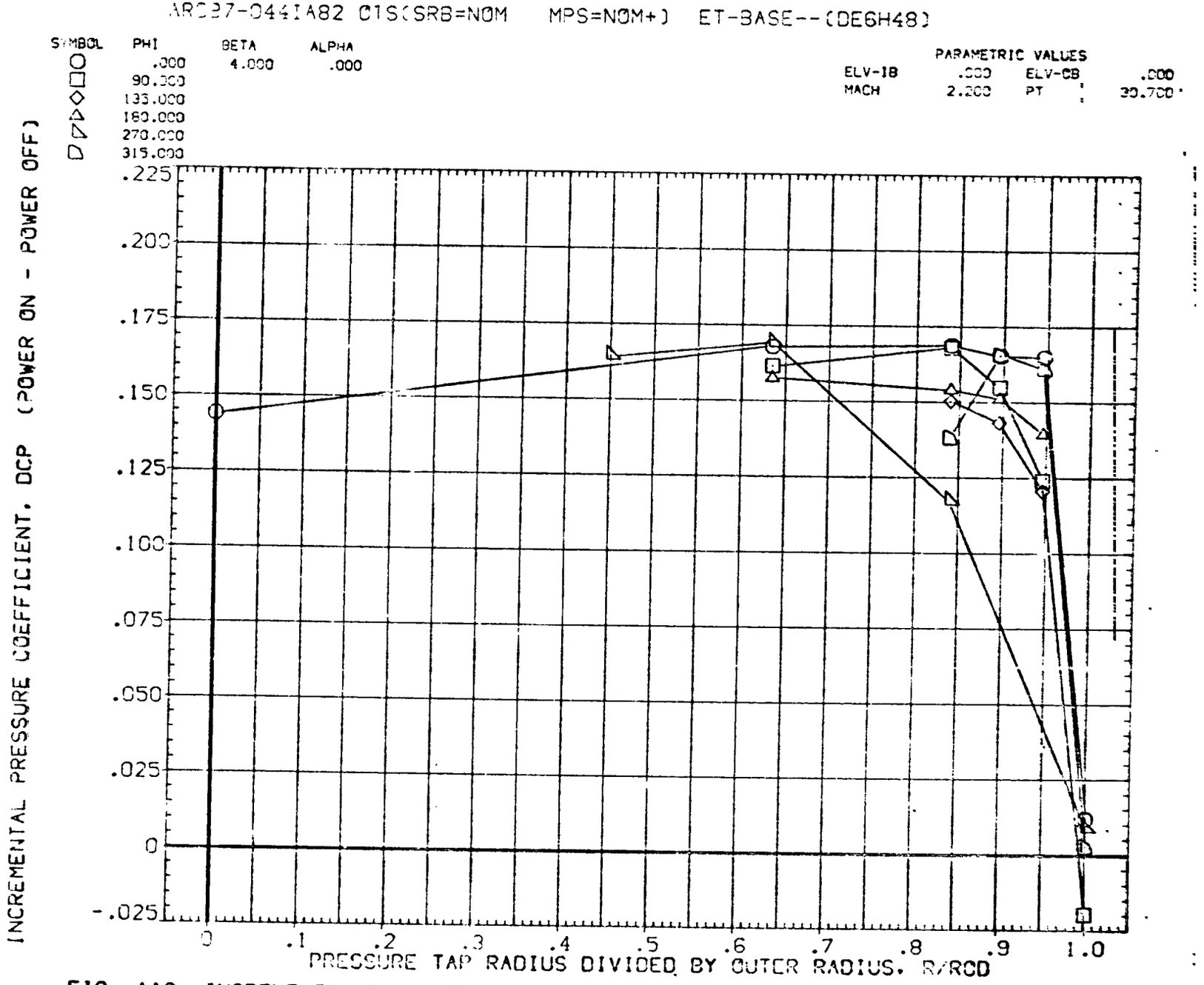


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

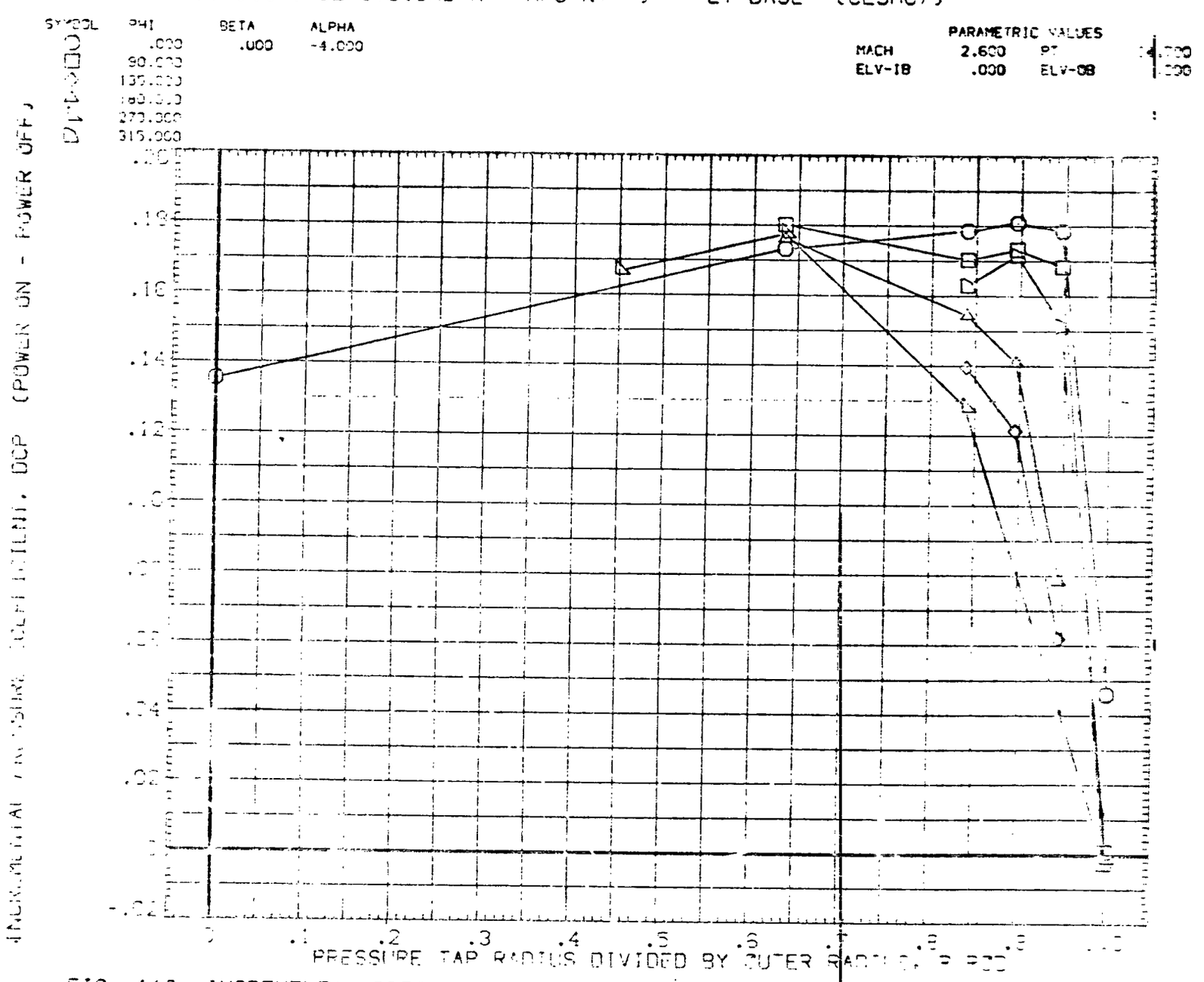


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

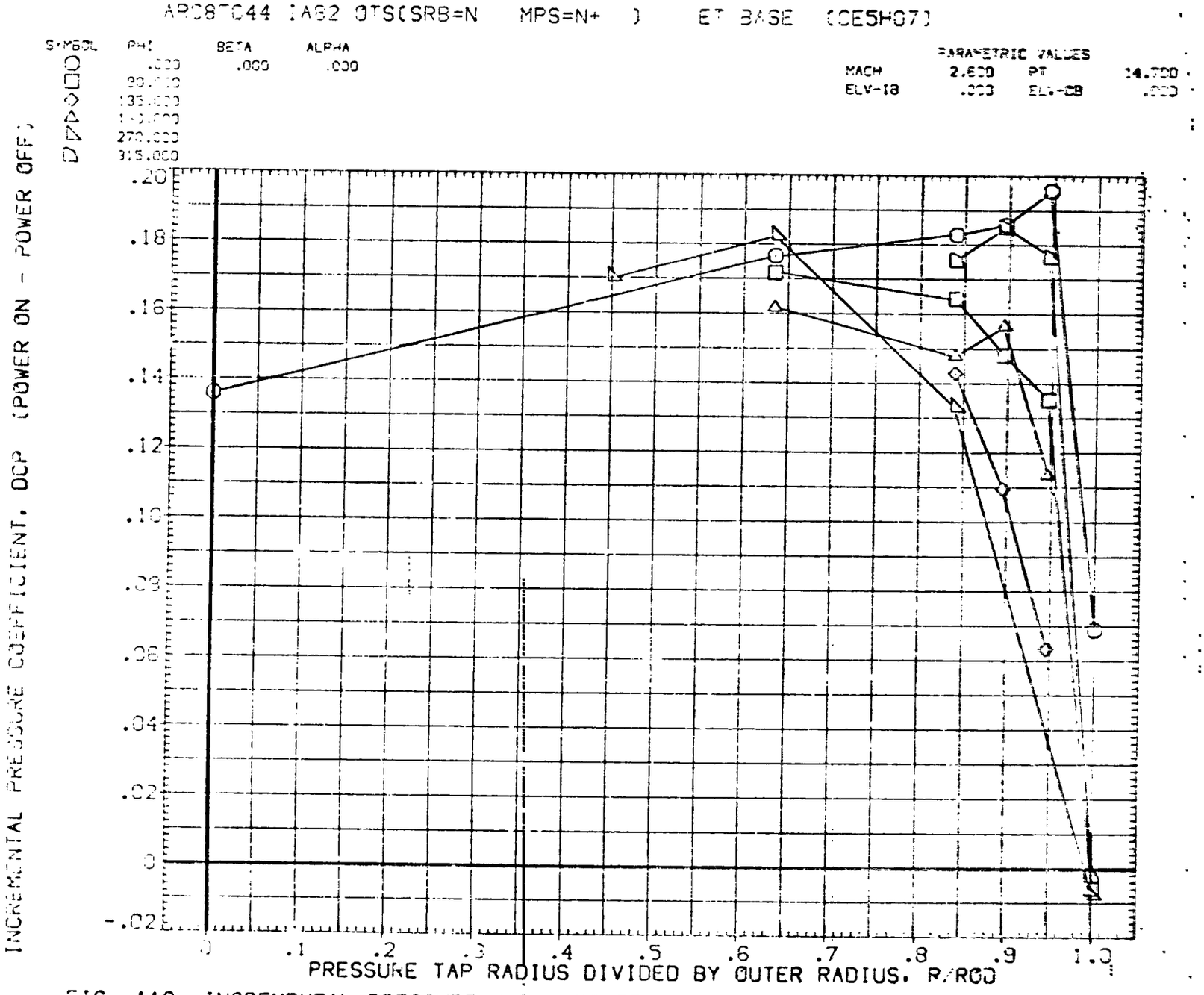


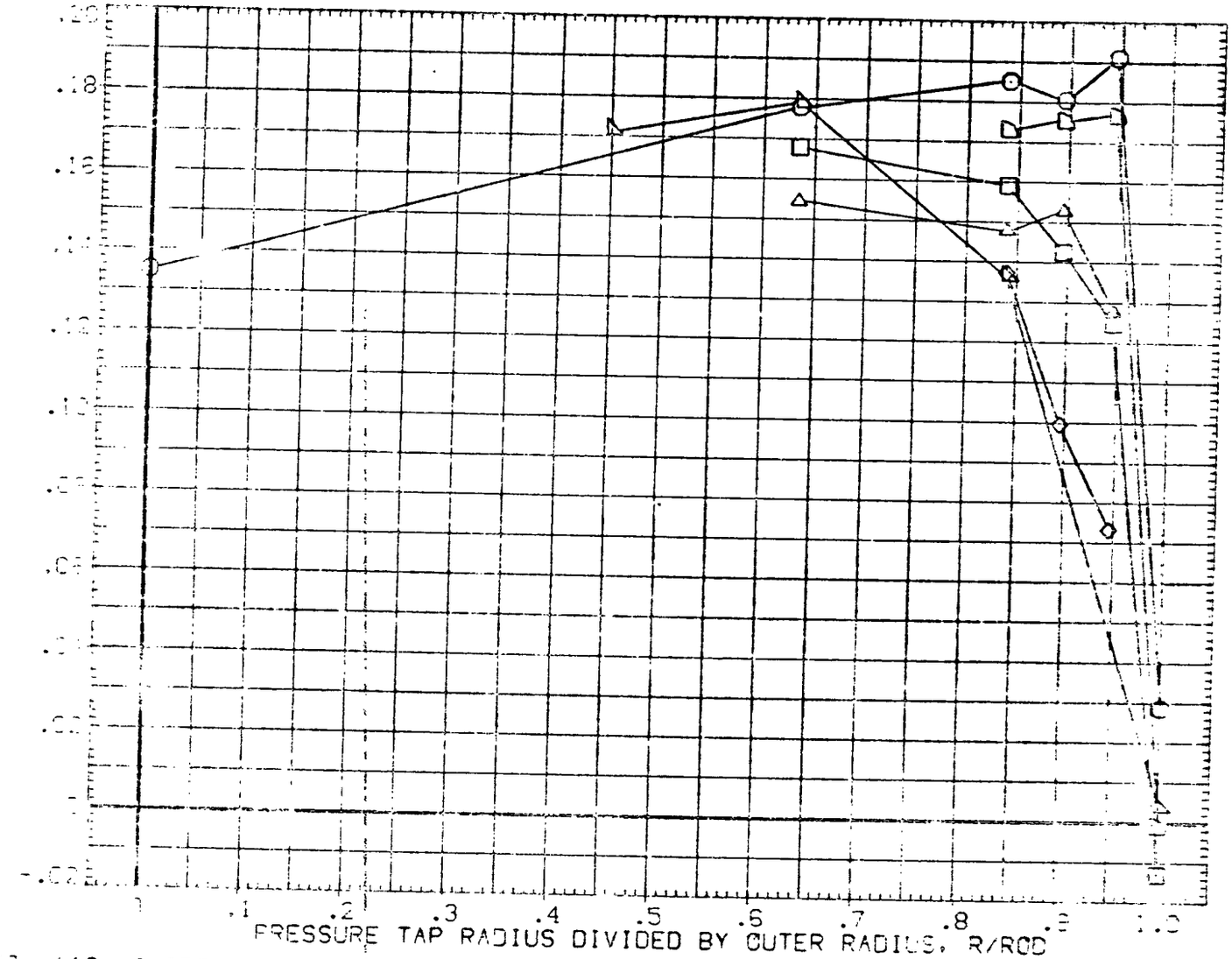
FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

ARC87044 IA82 0TS(SRB=N MPS=N+) ET BASE (CE5H07)

SYMBOL	PHI	BETA	ALPHA
	.000	.000	4.000
	90.000		
	135.000		
	180.000		
	270.000		
	315.000		

PARAMETRIC VALUES

MACH	2.600	PT	[illegible]
ELV-IB	.000	ELV-OB	[illegible]



INCREMENTAL PRESSURE COEFFICIENT, DCP (POWER ON - POWER OFF)

PRESSURE TAP RADIUS DIVIDED BY OUTER RADIUS, R/ROD

FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

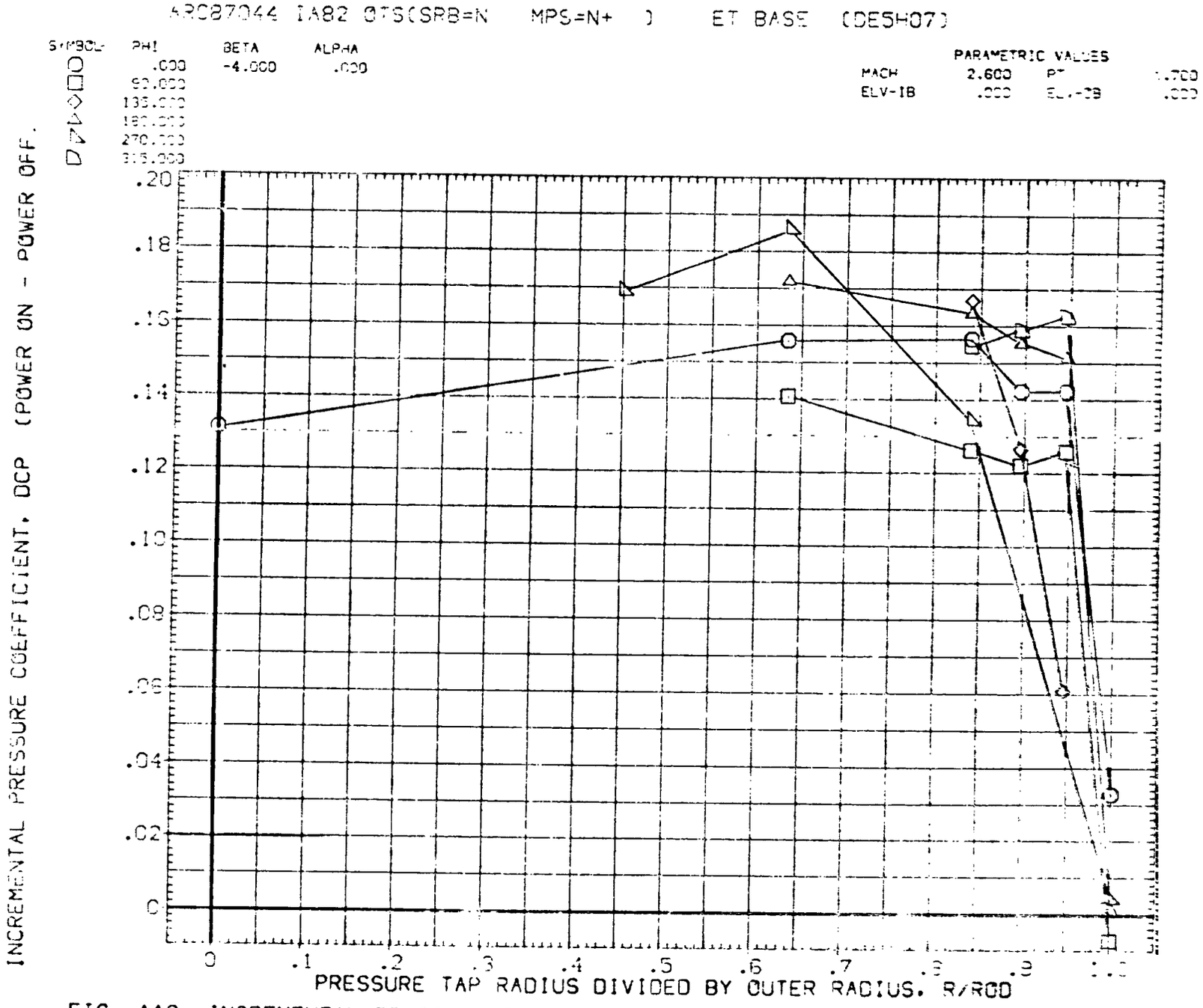


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

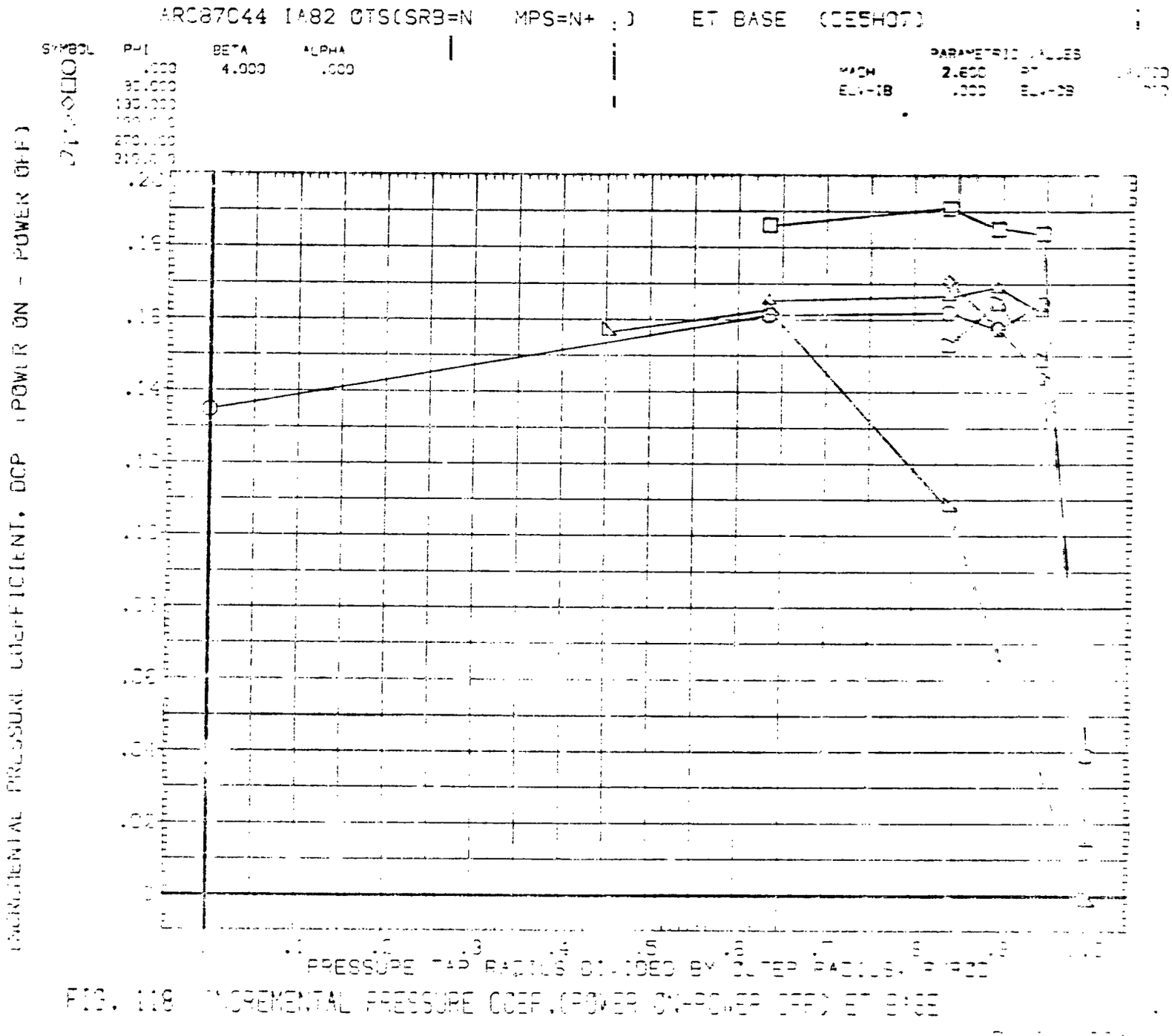


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

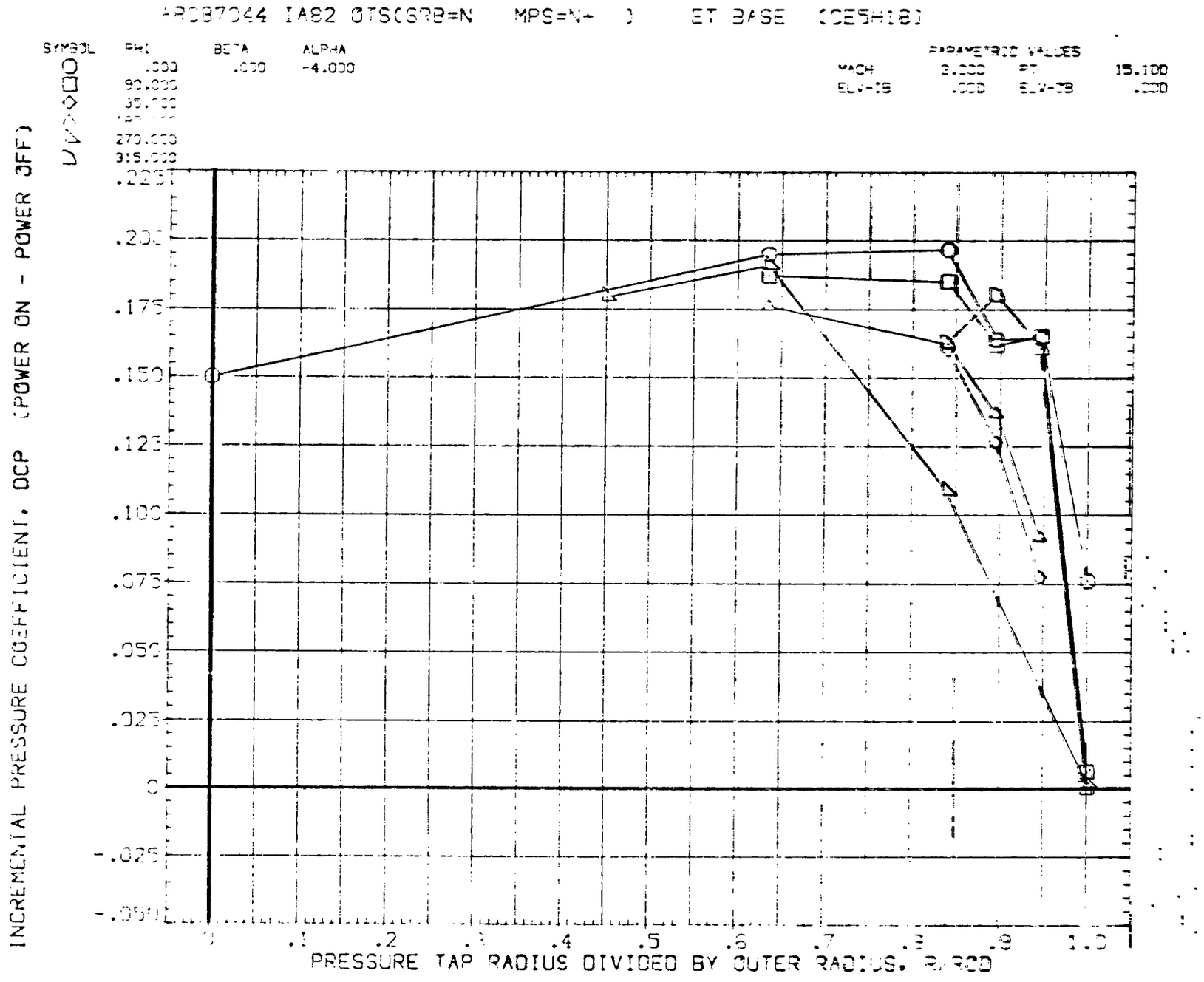


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

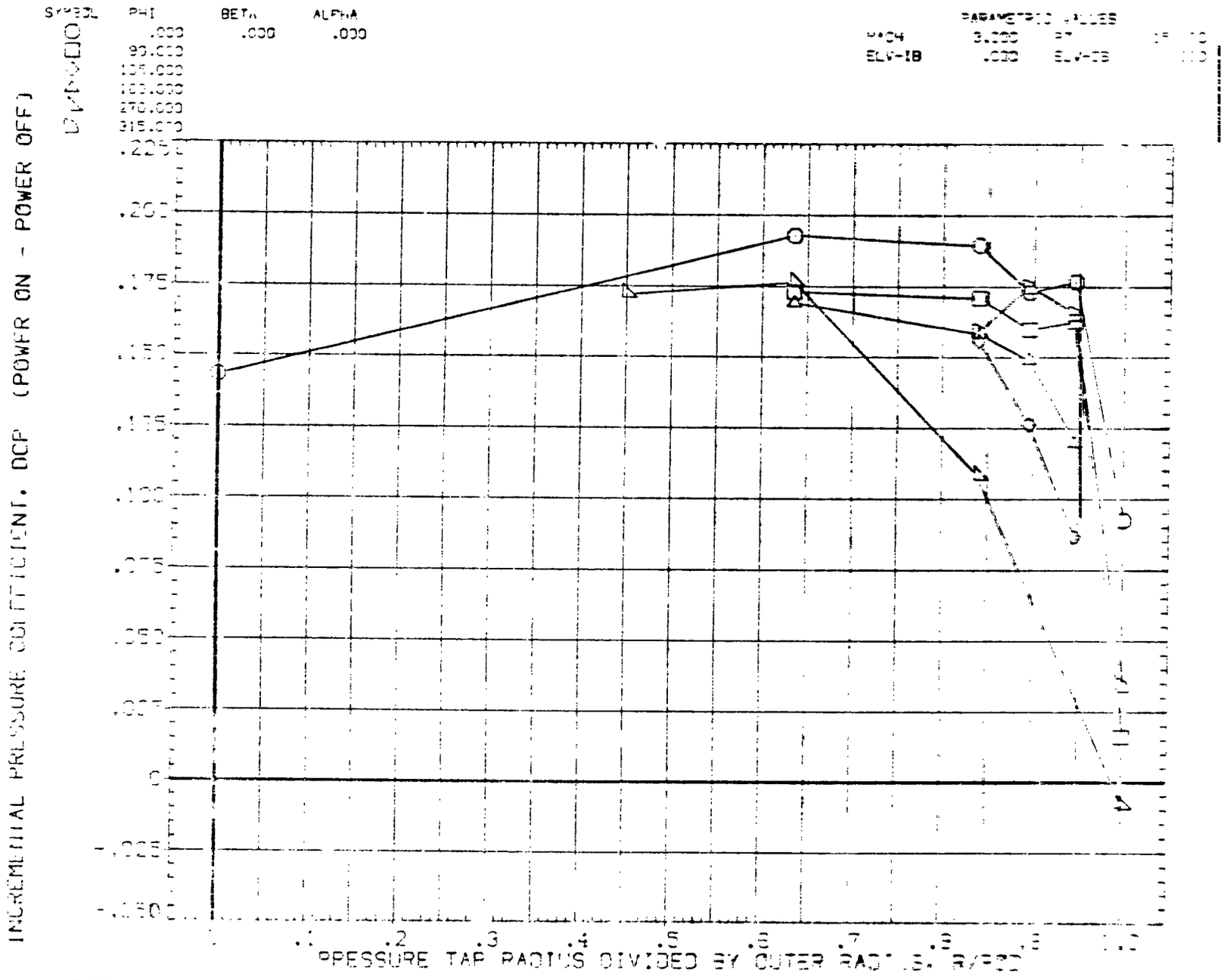


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

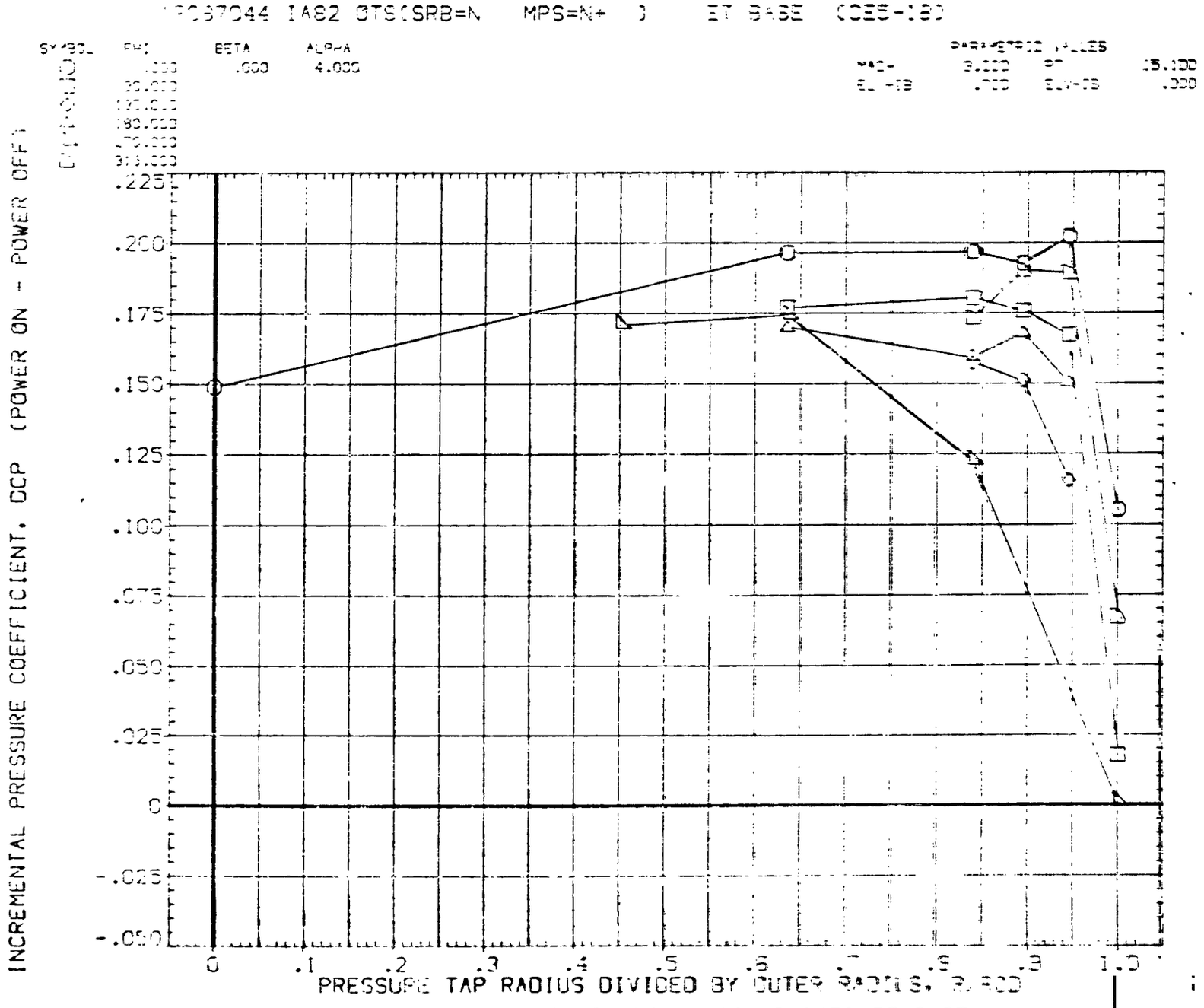


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

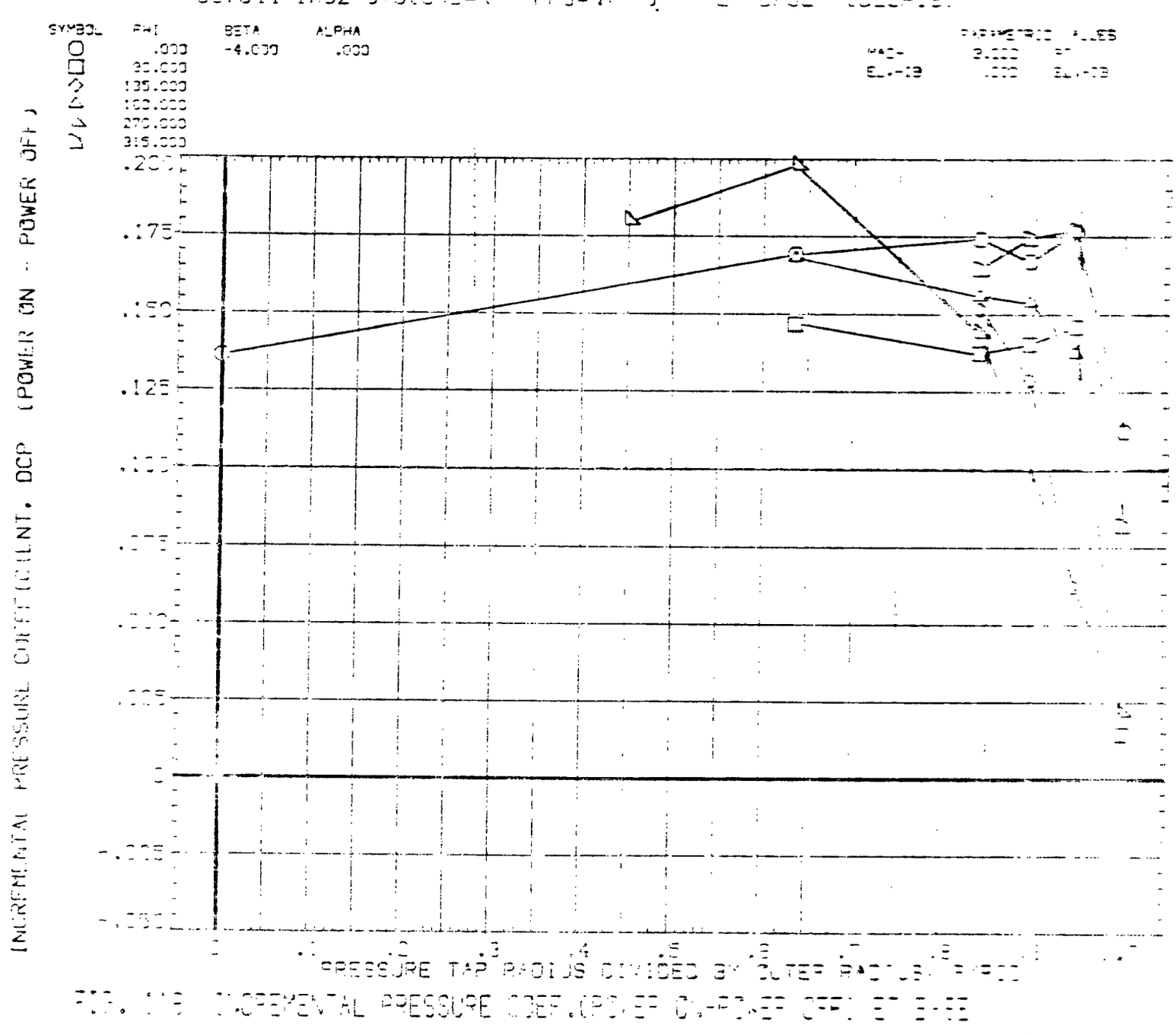


FIG. 113 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) AT BASE

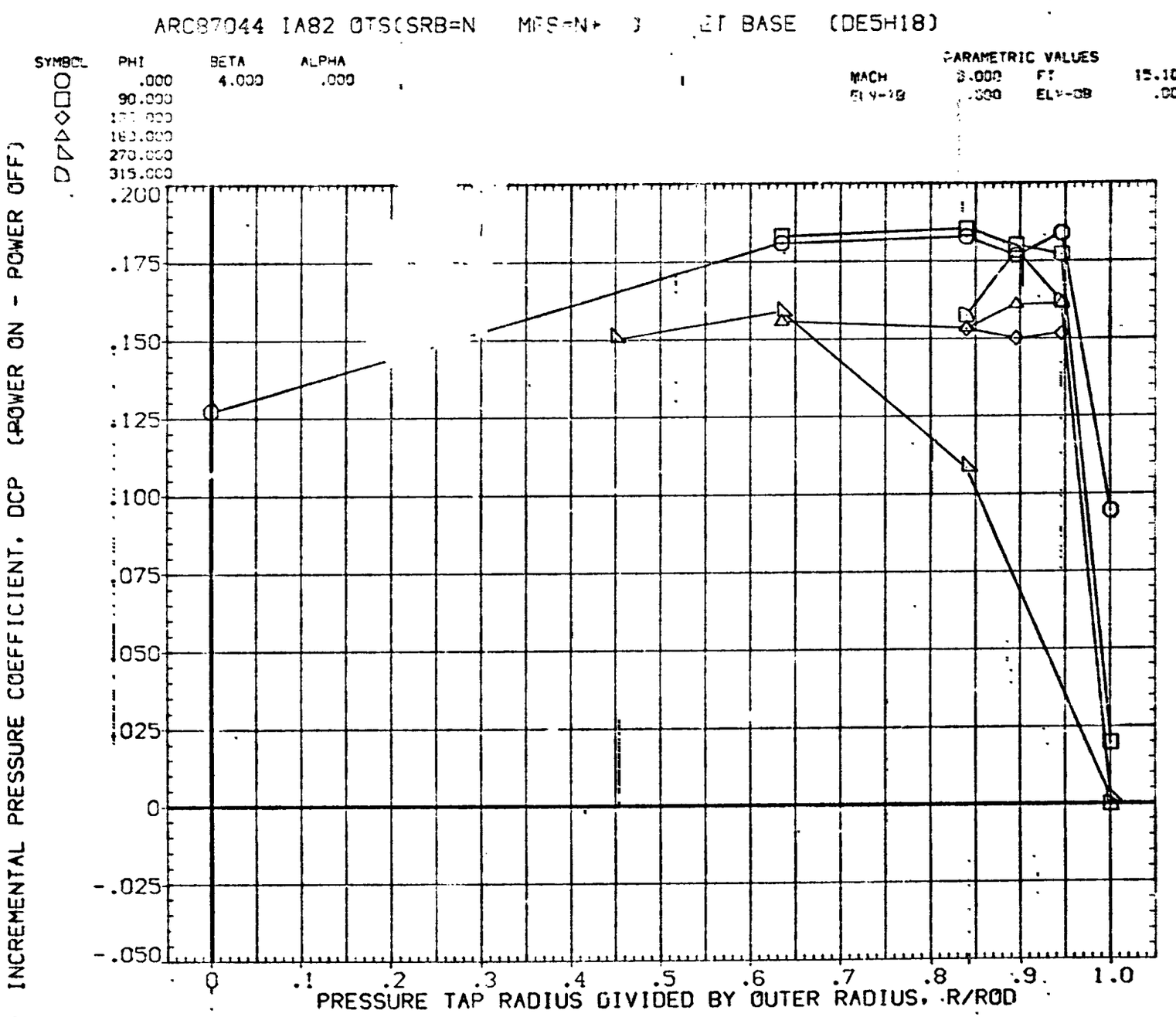


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

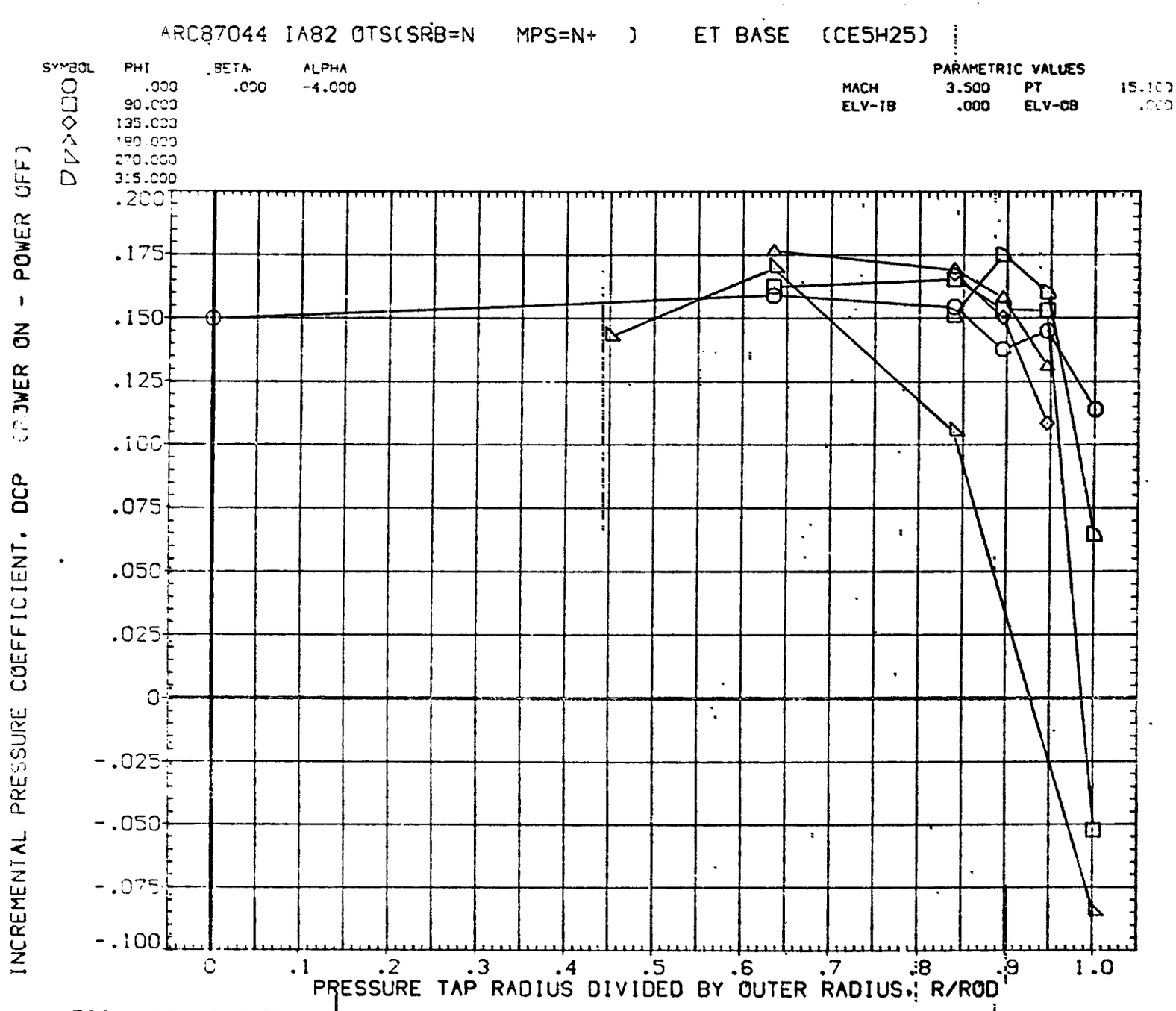


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

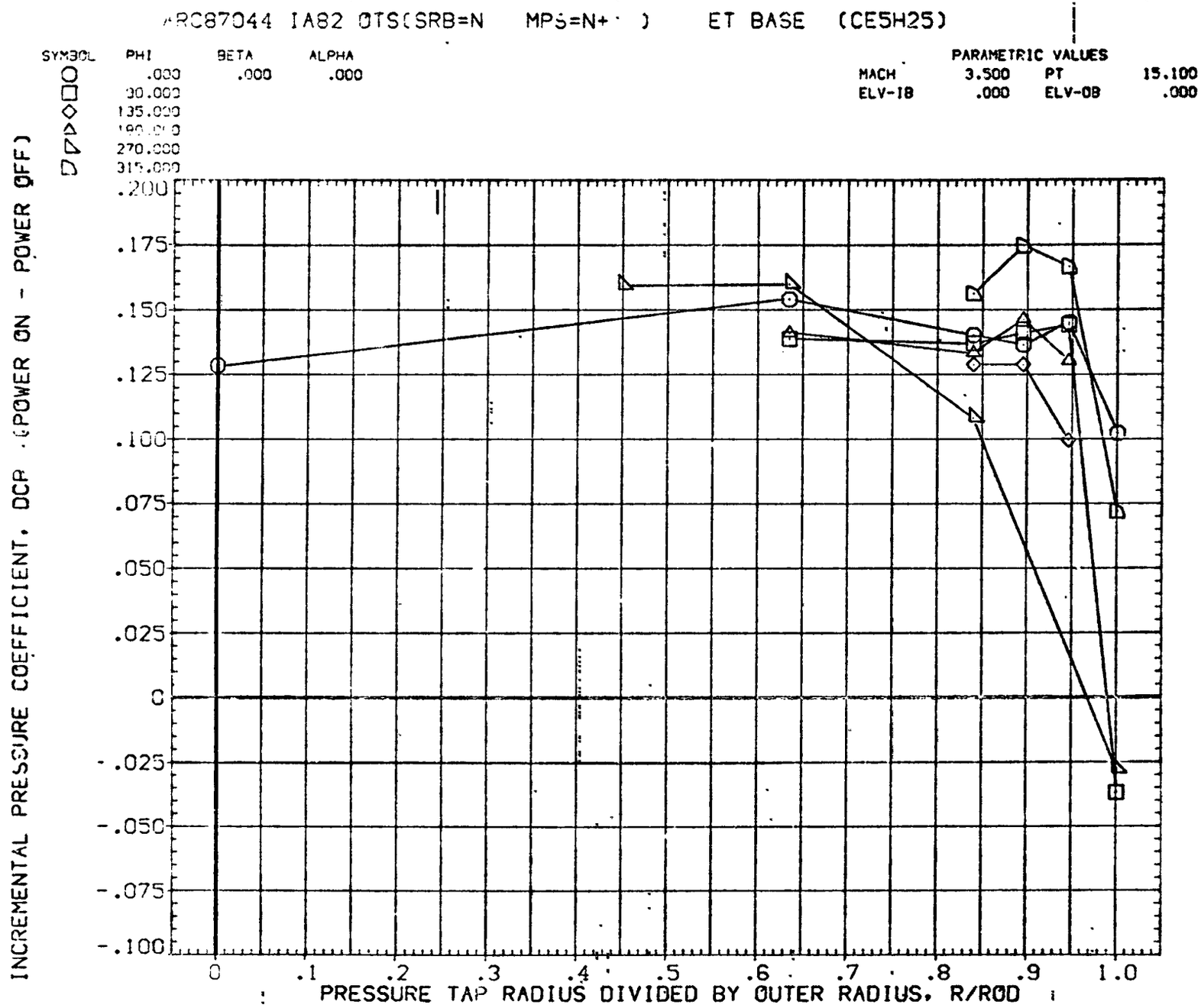


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

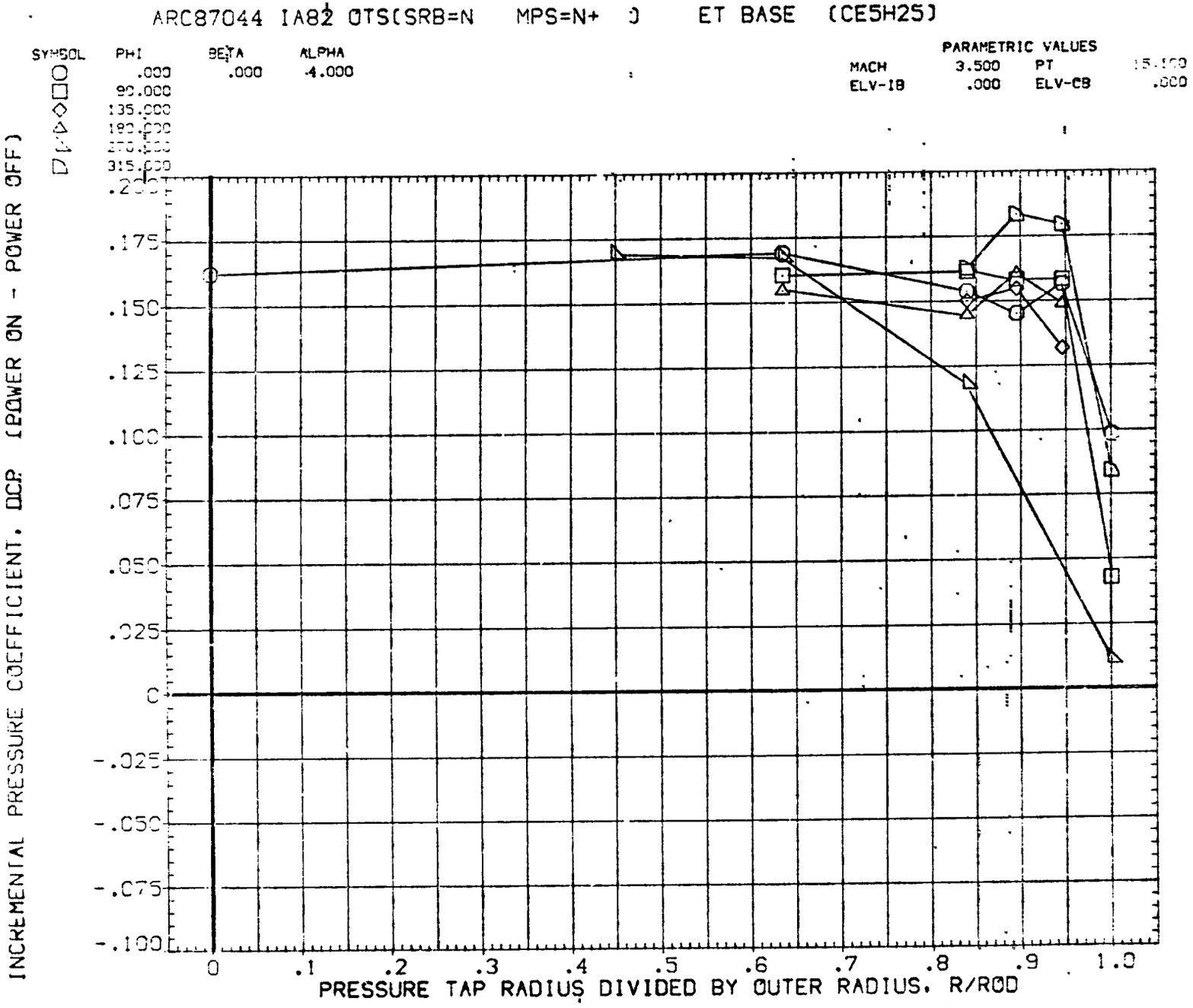


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

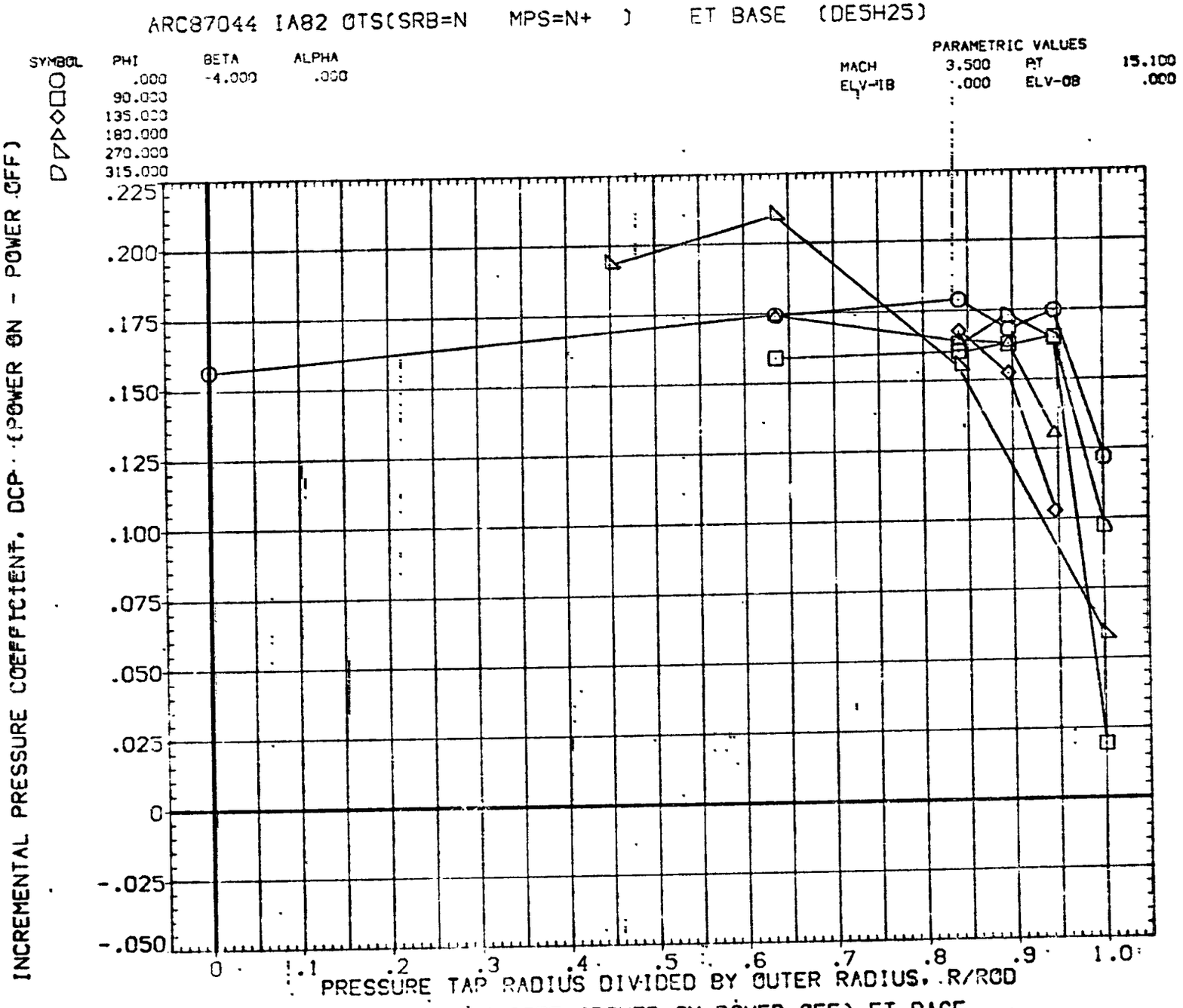


FIG. 118 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

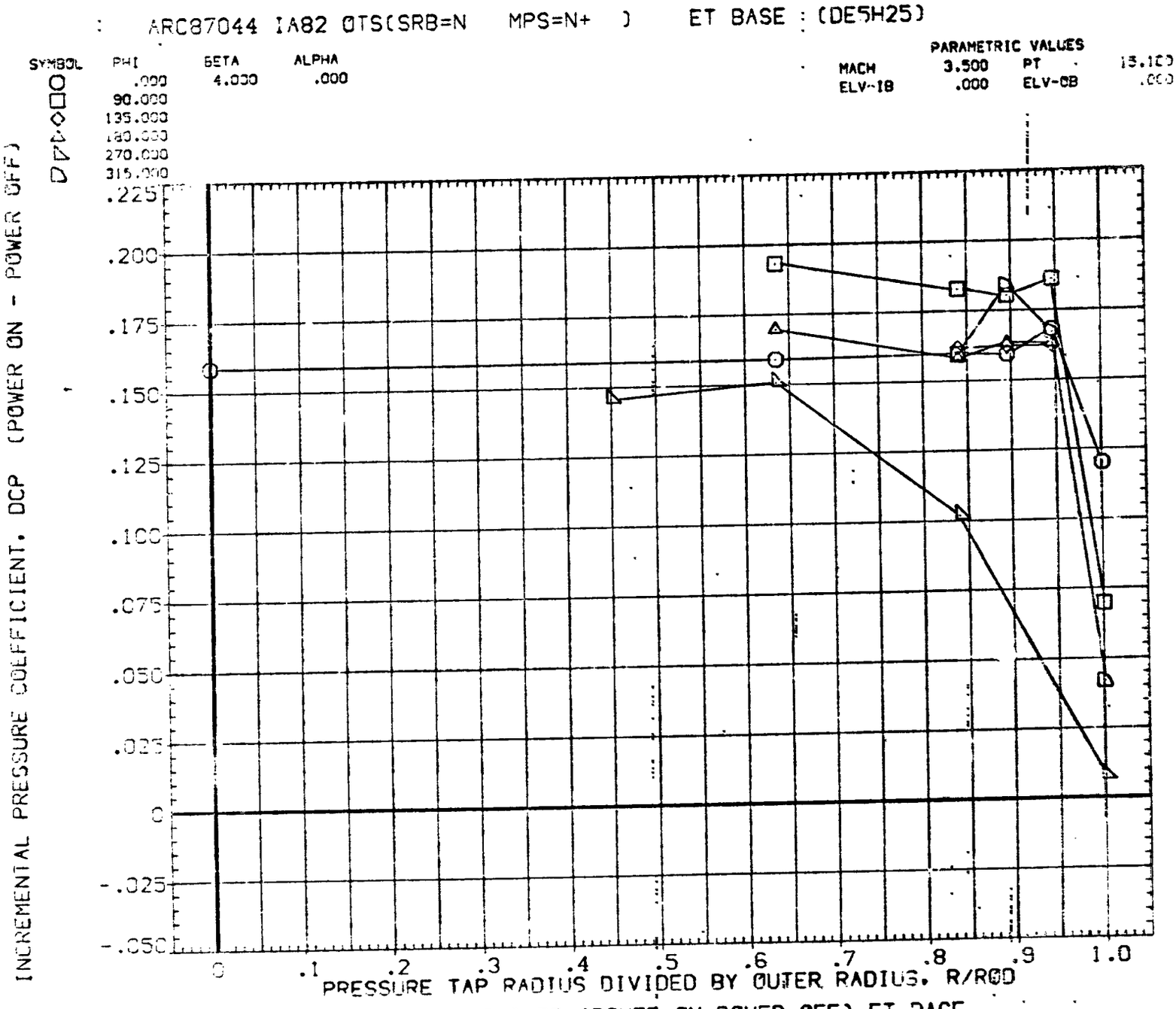


FIG. 116 INCREMENTAL PRESSURE COEF.(POWER ON-POWER OFF) ET BASE

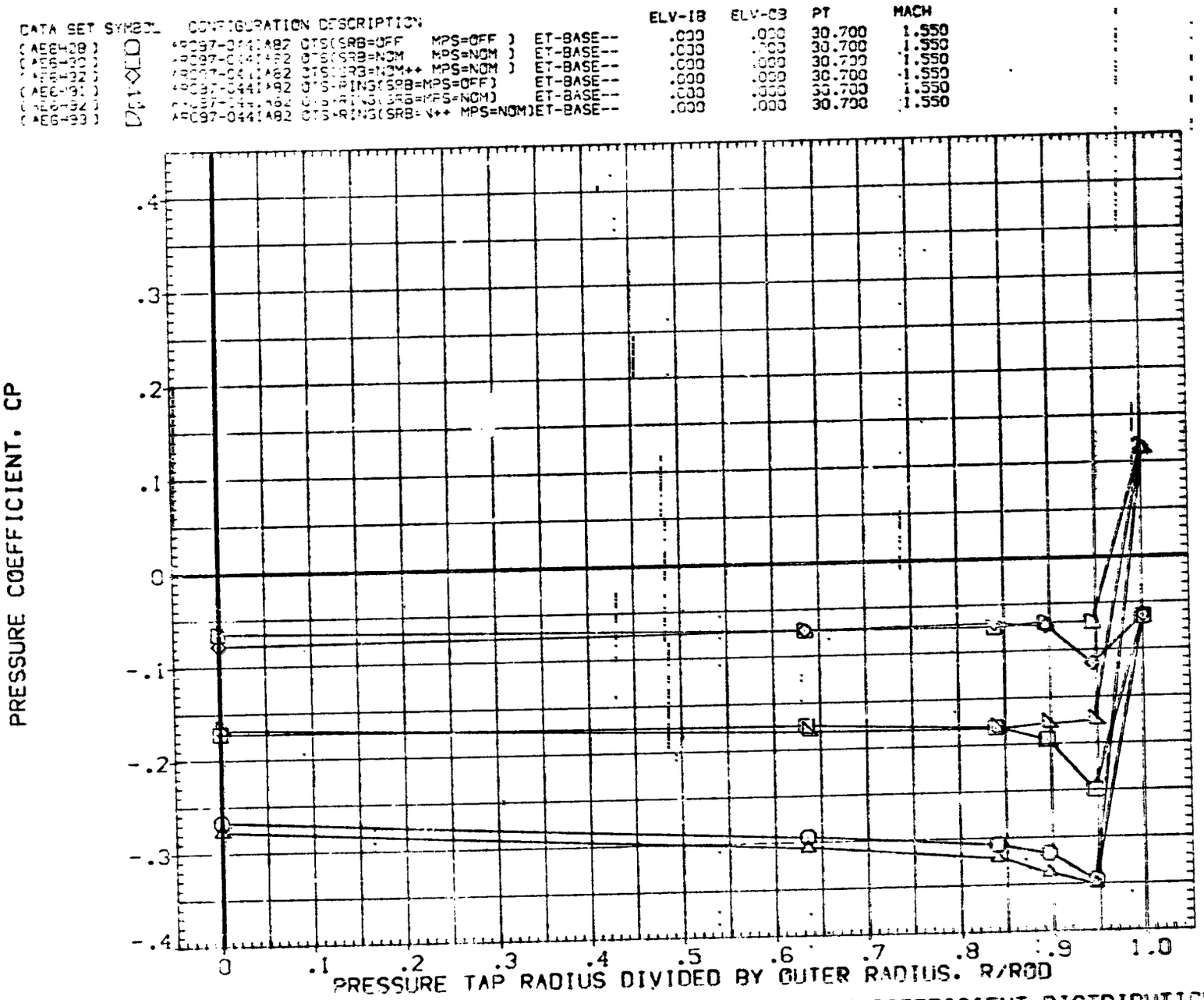


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 PHI = .000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-CB	PT	MACH
(A86H28)	A8C87-044[A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(A86H30)	A8C87-044[A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(A86H32)	A8C87-044[A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(A86H91)	A8C87-044[A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(A86H92)	A8C87-044[A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(A86H93)	A8C87-044[A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

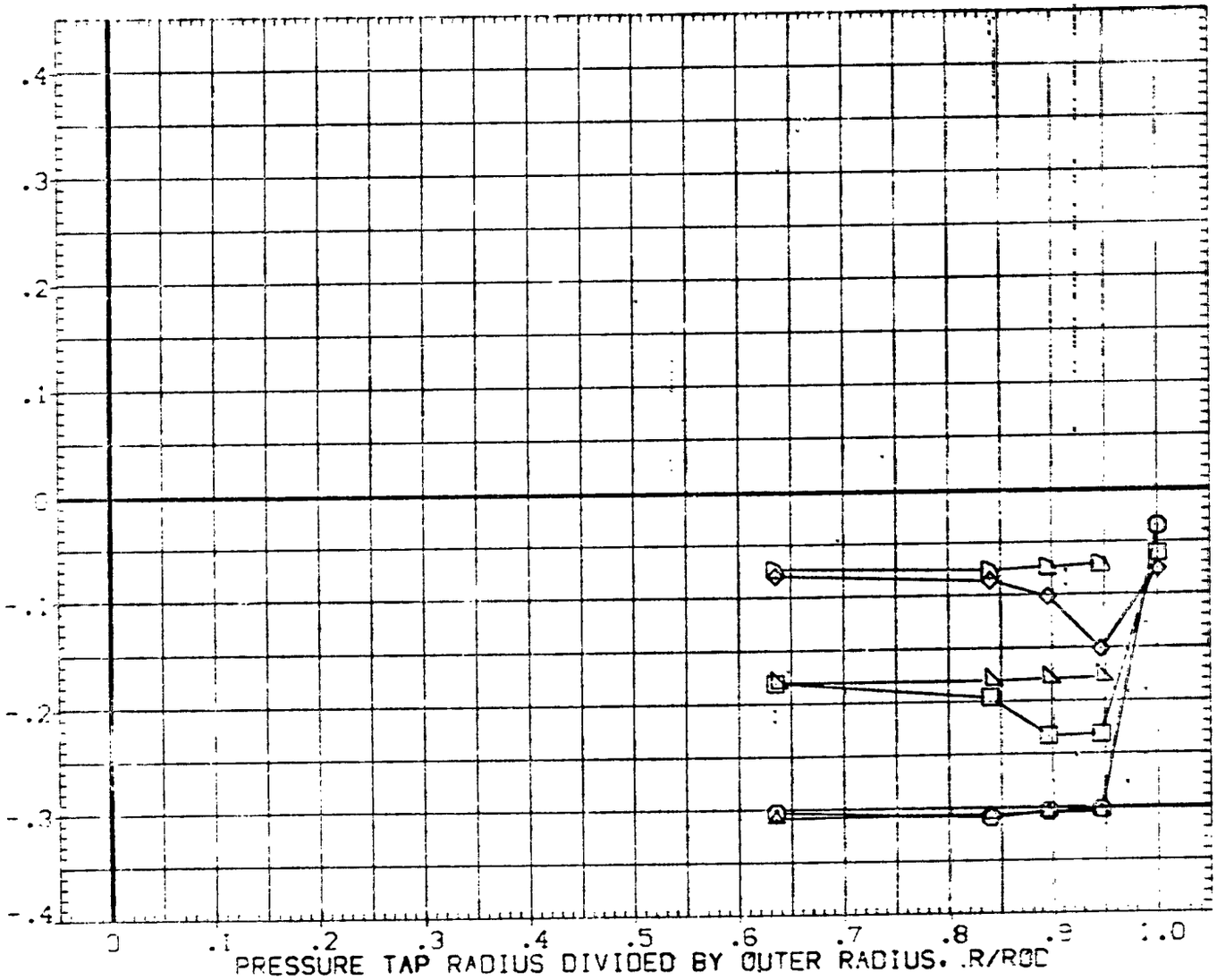


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALP = 1.000 BETA = .000 PHI = 90.000 PAGE 876

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AEGH28)		AR097-0141A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AEGH30)		AR097-0141A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AEGH32)		AR097-0141A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AEGH31)		AR097-0141A82 OTS-RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AEGH33)		AR097-0141A82 OTS-RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AEGH93)		AR097-0441A82 OTS-RING(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

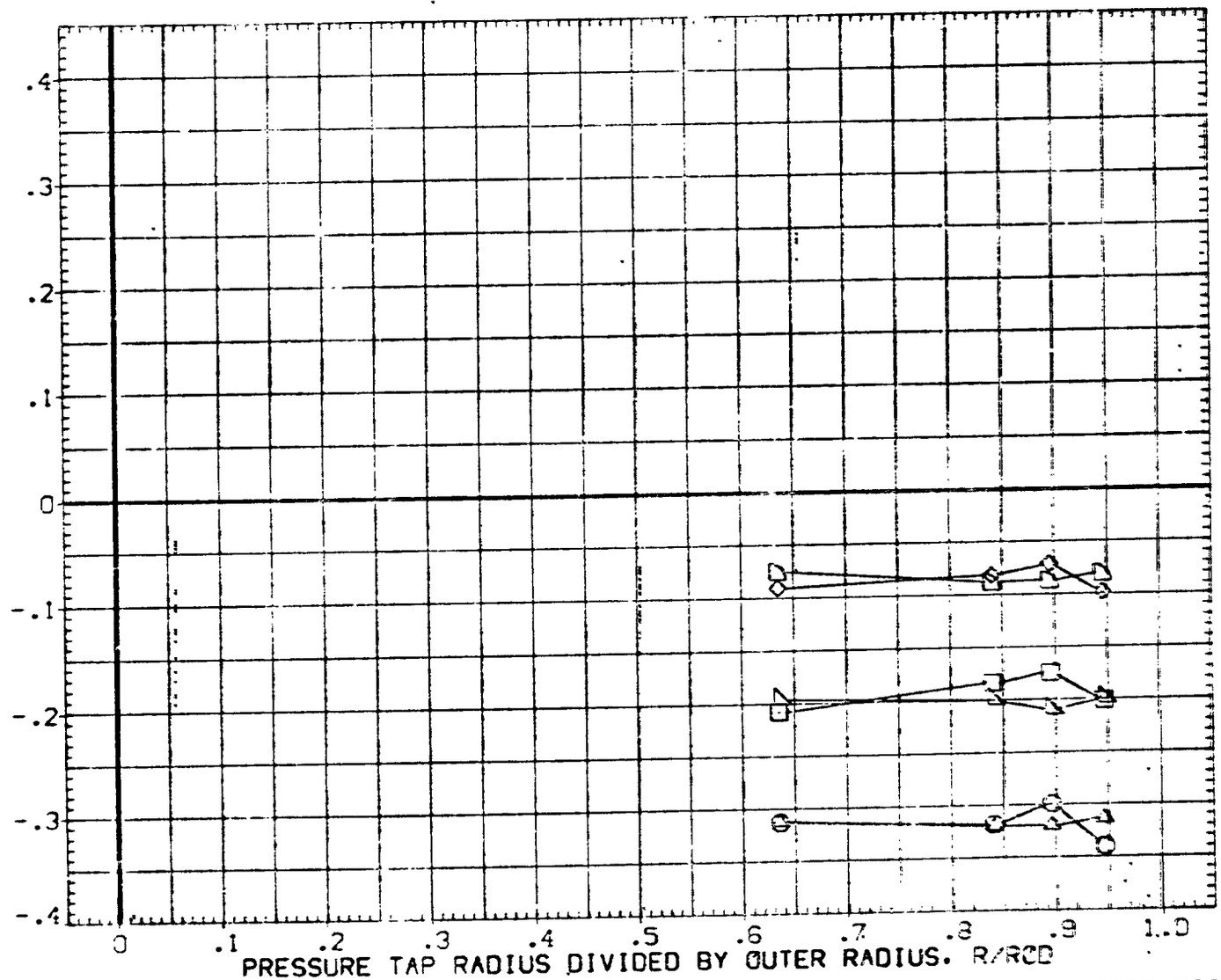


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	PT	MACH
(4861-28)		A0097-044IA92 OTS(SRB=OFF MPS=OFF) ET-BASE--	.000	.000	30.700	1.550
(4861-30)		A0097-044IA92 OTS(SRB=NOM MPS=NOM) ET-BASE--	.000	.000	30.700	1.550
(4861-32)		A0097-044IA92 OTS(SRB=NOM++ MPS=NOM) ET-BASE--	.000	.000	30.700	1.550
(4861-91)		A0097-044IA92 OTS+RING(SRB=MPS=OFF) ET-BASE--	.000	.000	30.700	1.550
(4861-92)		A0097-044IA92 OTS+RING(SRB=MPS=NOM) ET-BASE--	.000	.000	30.700	1.550
(4861-93)		A0097-044IA92 OTS+RING(SRB=NOM++ MPS=NOM) ET-BASE--	.000	.000	30.700	1.550

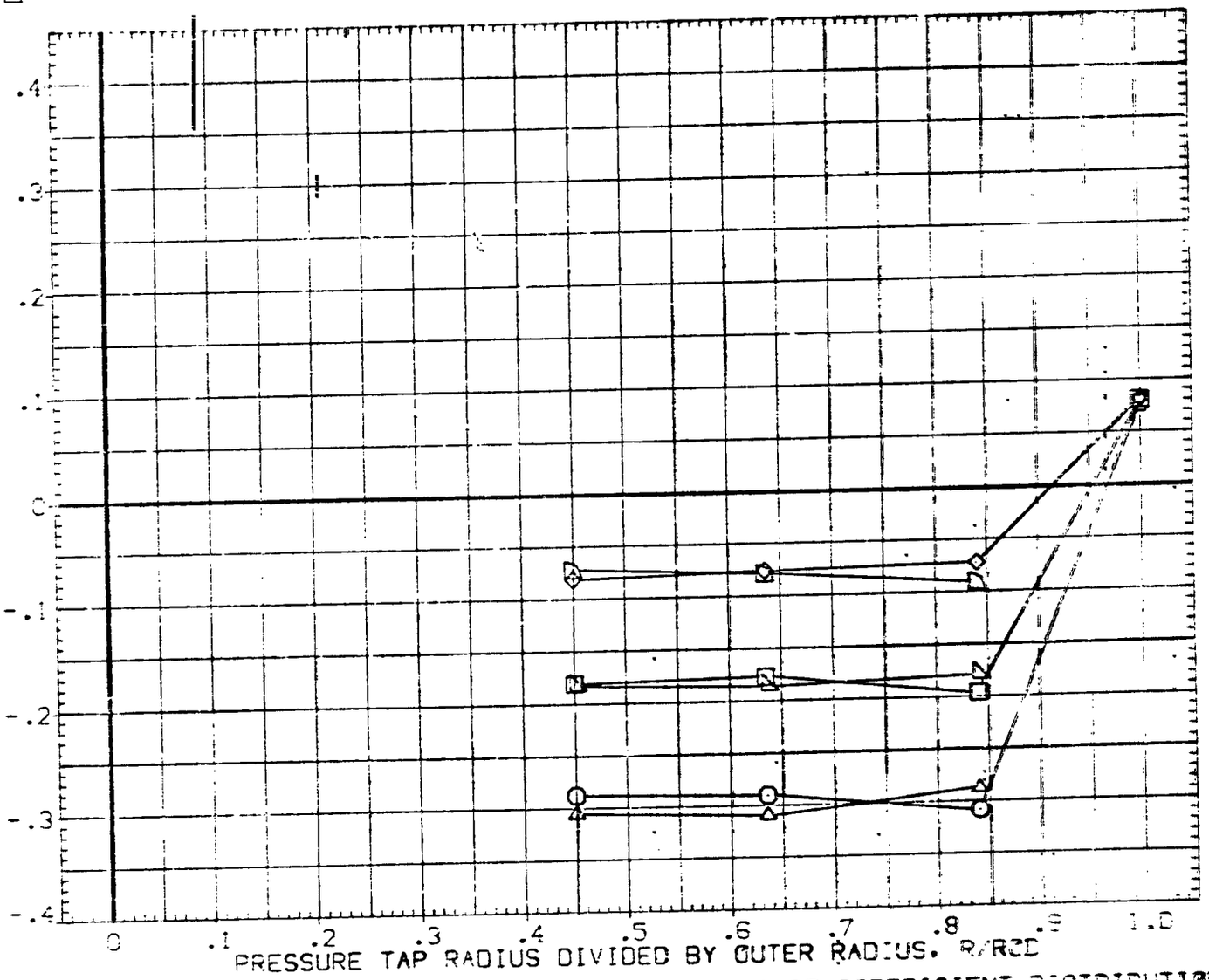


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	PT	MACH
(AE6428)		ARC97-044(A82 OTS(SRB=OFF MPS=OFF) ET-BASE--	.000	.000	30.700	1.550
(AE6429)		ARC97-044(A82 OTS(SRB=NOM MPS=NOM) ET-BASE--	.000	.000	30.700	1.550
(AE6430)		ARC97-044(A82 OTS(SRB=NOM++ MPS=NOM) ET-BASE--	.000	.000	30.700	1.550
(AE6431)		ARC97-044(A82 OTS+RING(SRB=MPS=OFF) ET-BASE--	.000	.000	30.700	1.550
(AE6432)		ARC97-044(A82 OTS+RING(SRB=MPS=NOM) ET-BASE--	.000	.000	30.700	1.550
(AE6433)		ARC97-044(A82 OTS+RING(SRB=N++ MPS=NOM)ET-BASE--	.000	.000	30.700	1.550

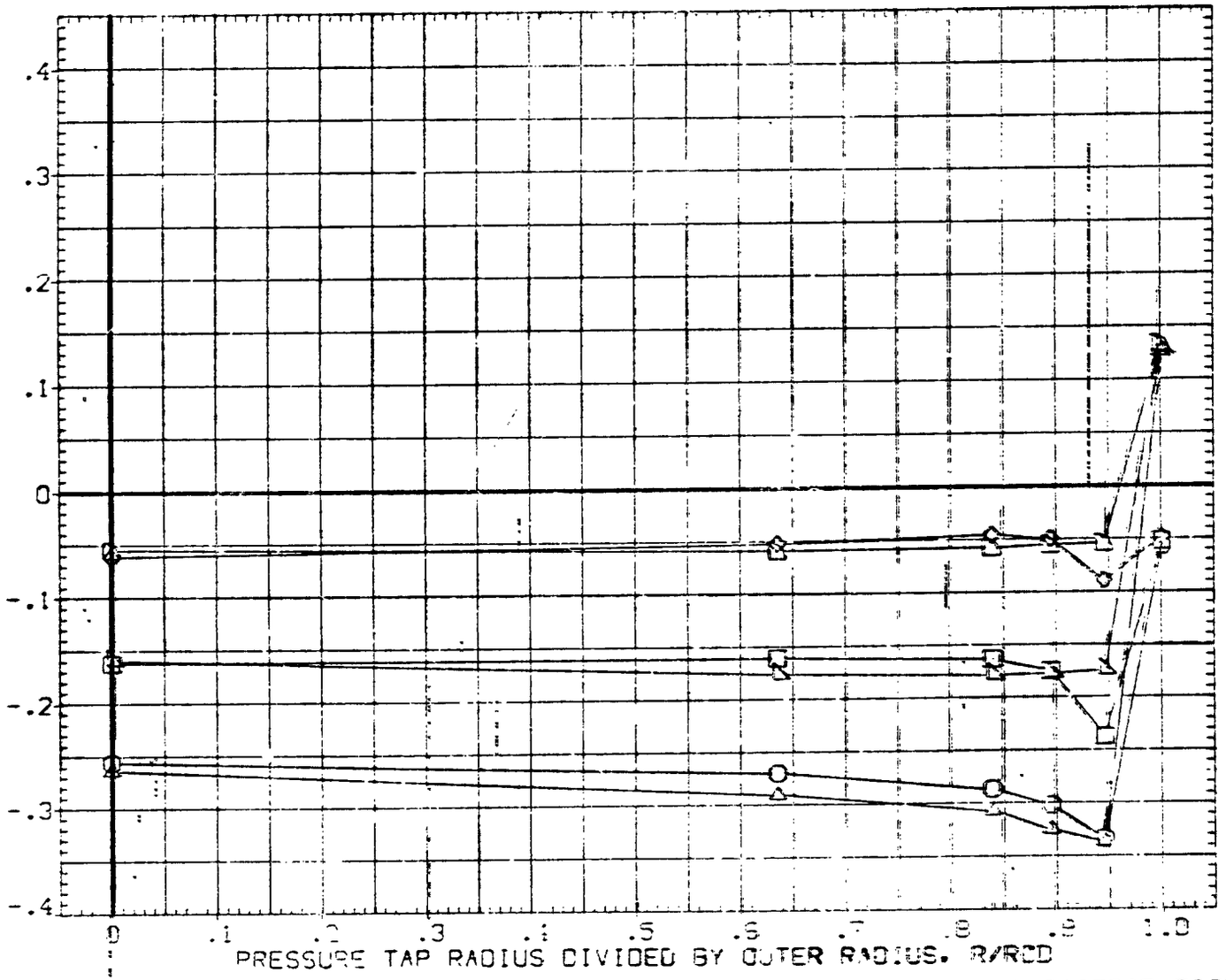


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 MACH = .000

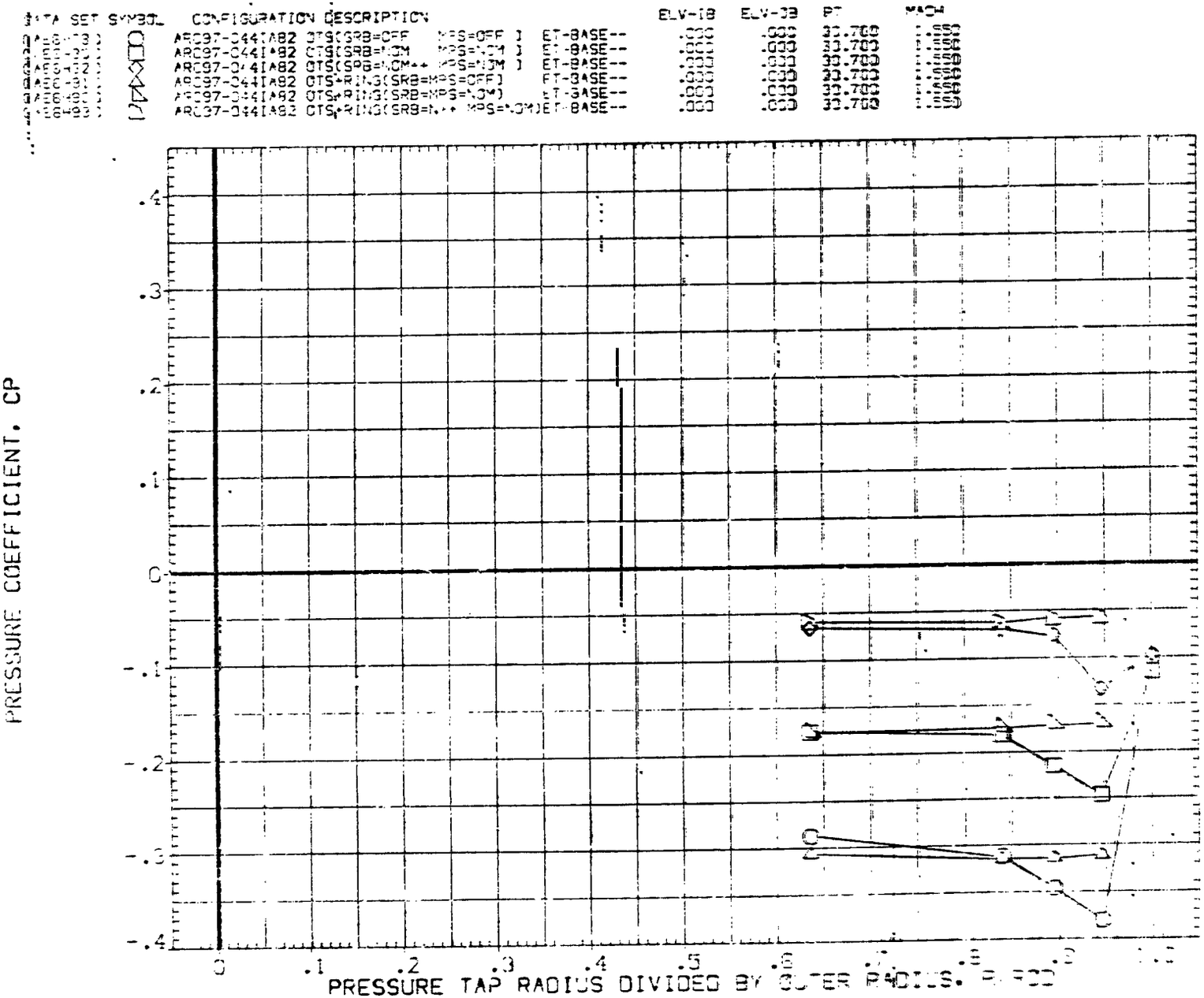


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6-28)	AP107-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6-33)	AP107-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6-32)	AP107-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6-31)	AP107-044IA 2 OTS(RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6F-32)	AP107-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6F-33)	AP107-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

PRESSURE COEFFICIENT, CP

.4
.3
.2
.1
0
-.1
-.2
-.3
-.4

0 .1 .2 .3 .4 .5 .6 .8 1.0

PRESSURE TAP RADIUS DIVIDED BY OUTER RADIUS, R/R2D

FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = 180.0

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6428)	□	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6430)	○	ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6432)	△	ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6491)	◇	ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6492)	▽	ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6493)	⊲	ARC97-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

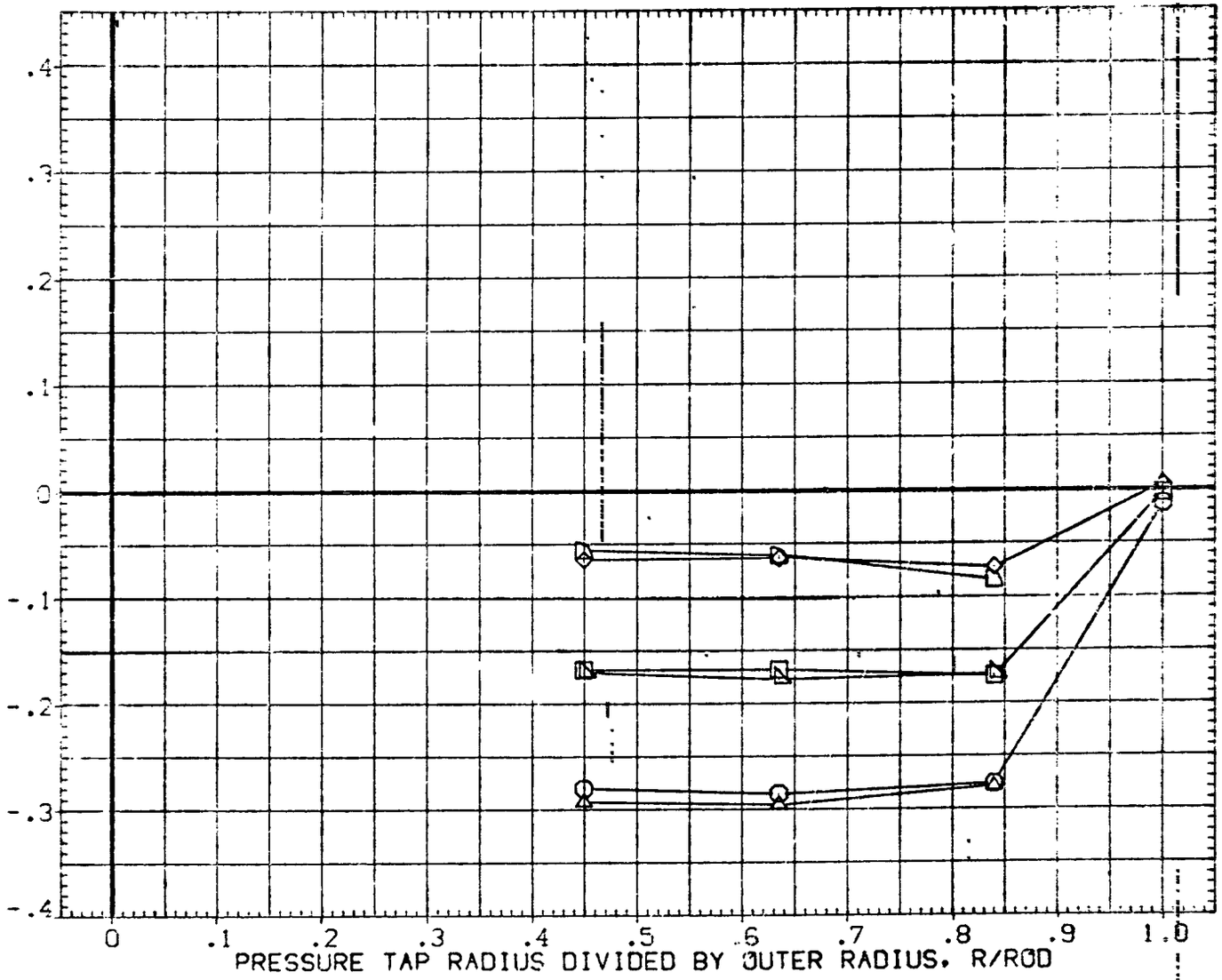


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = 270.000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6428)	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6430)	ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6432)	ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6491)	ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6492)	ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6493)	ARC97-044IA82 OTS+RING(SRB=NM+ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

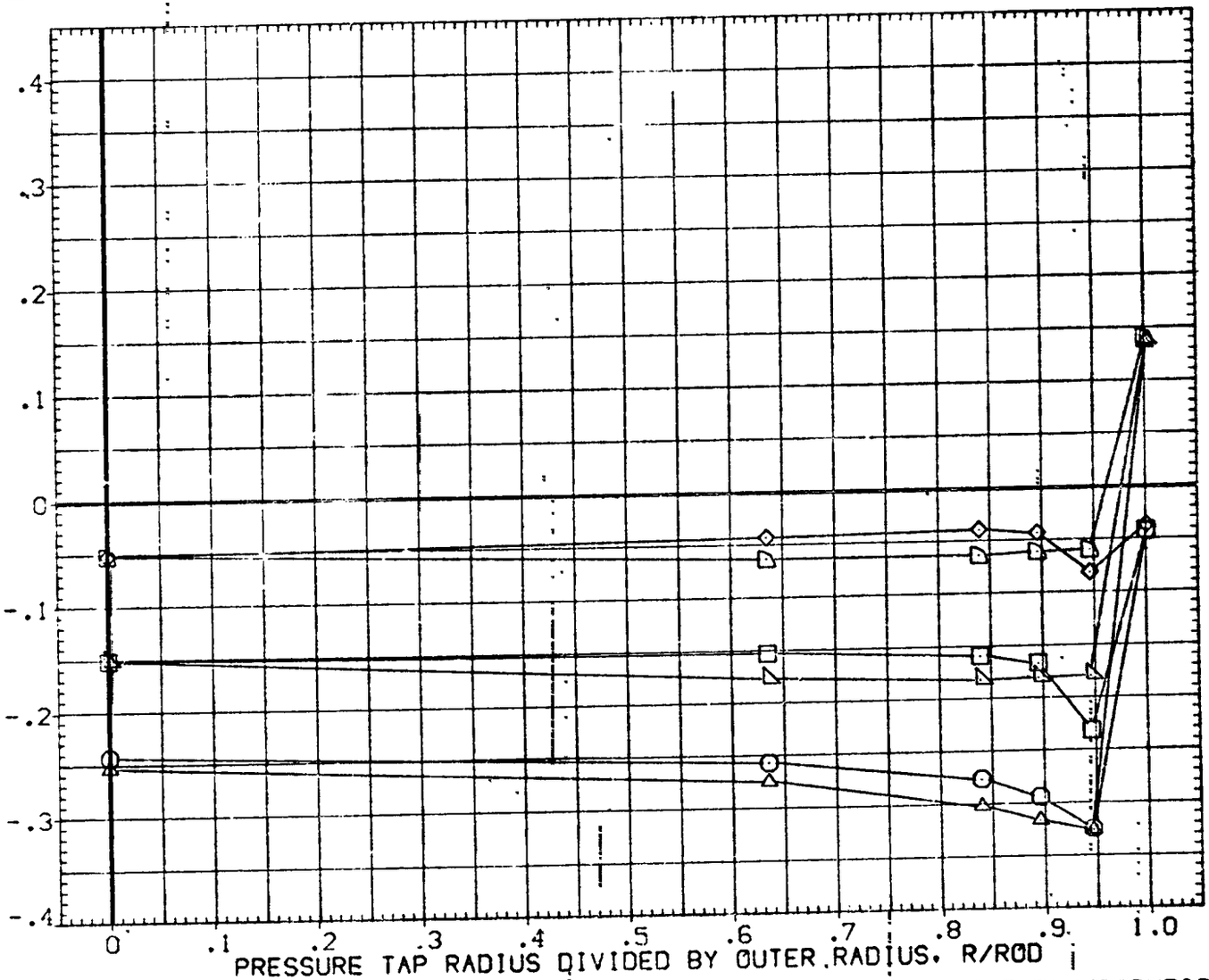


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6428).	□	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6430)	◇	ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6432)	△	ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6491)	▽	ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6492).	⊠	ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6493)	⊡	ARC97-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

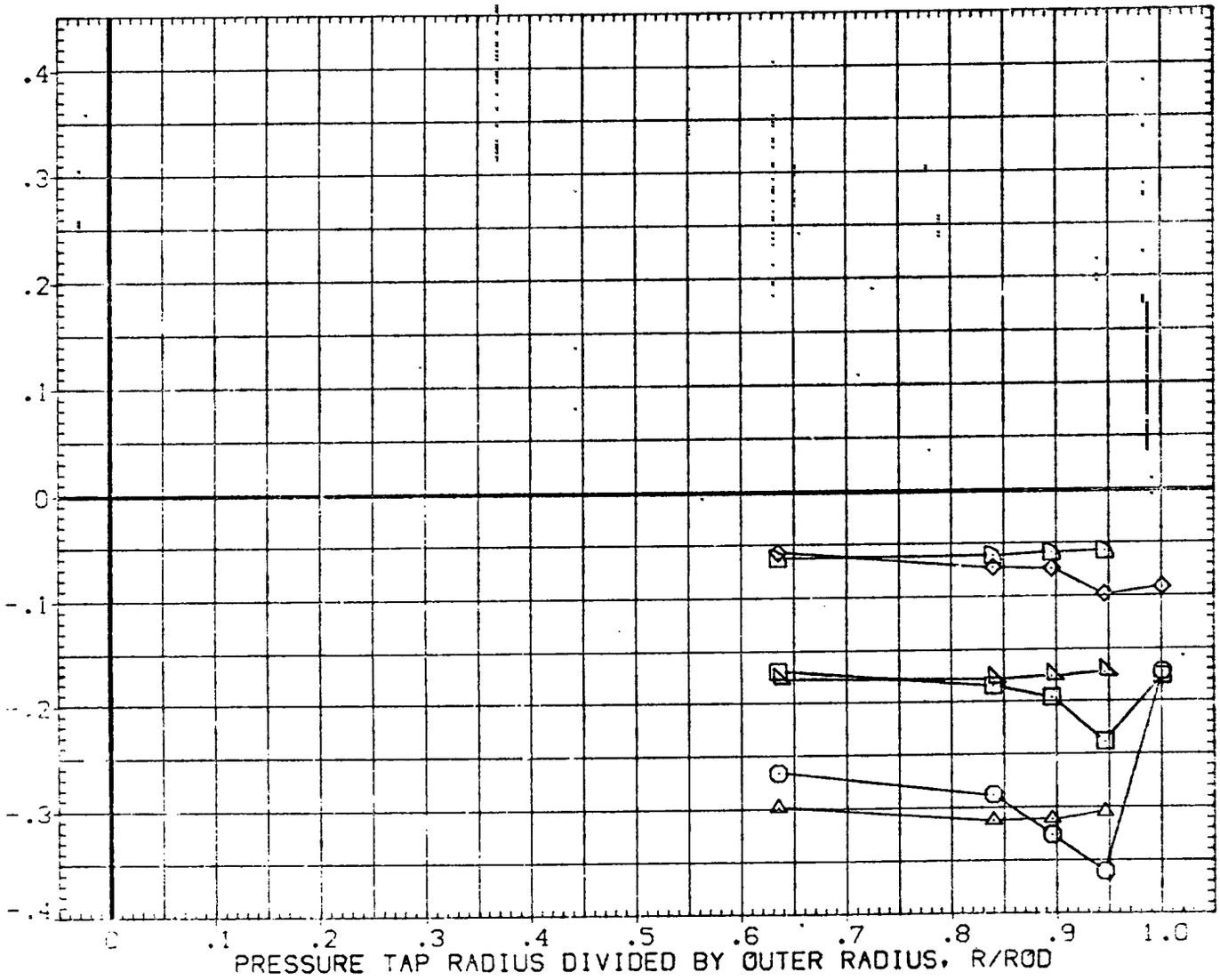


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 90.000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AEGH28)	ARC37-044(A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AEGH30)	ARC37-044(A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AEGH32)	ARC37-044(A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AEGH91)	ARC37-044(A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AEGH92)	ARC37-044(A82 OTS+RING(SRB=MPS NOM)	ET-BASE--	.000	.000	30.700	1.550
(AEGH93)	ARC37-044(A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

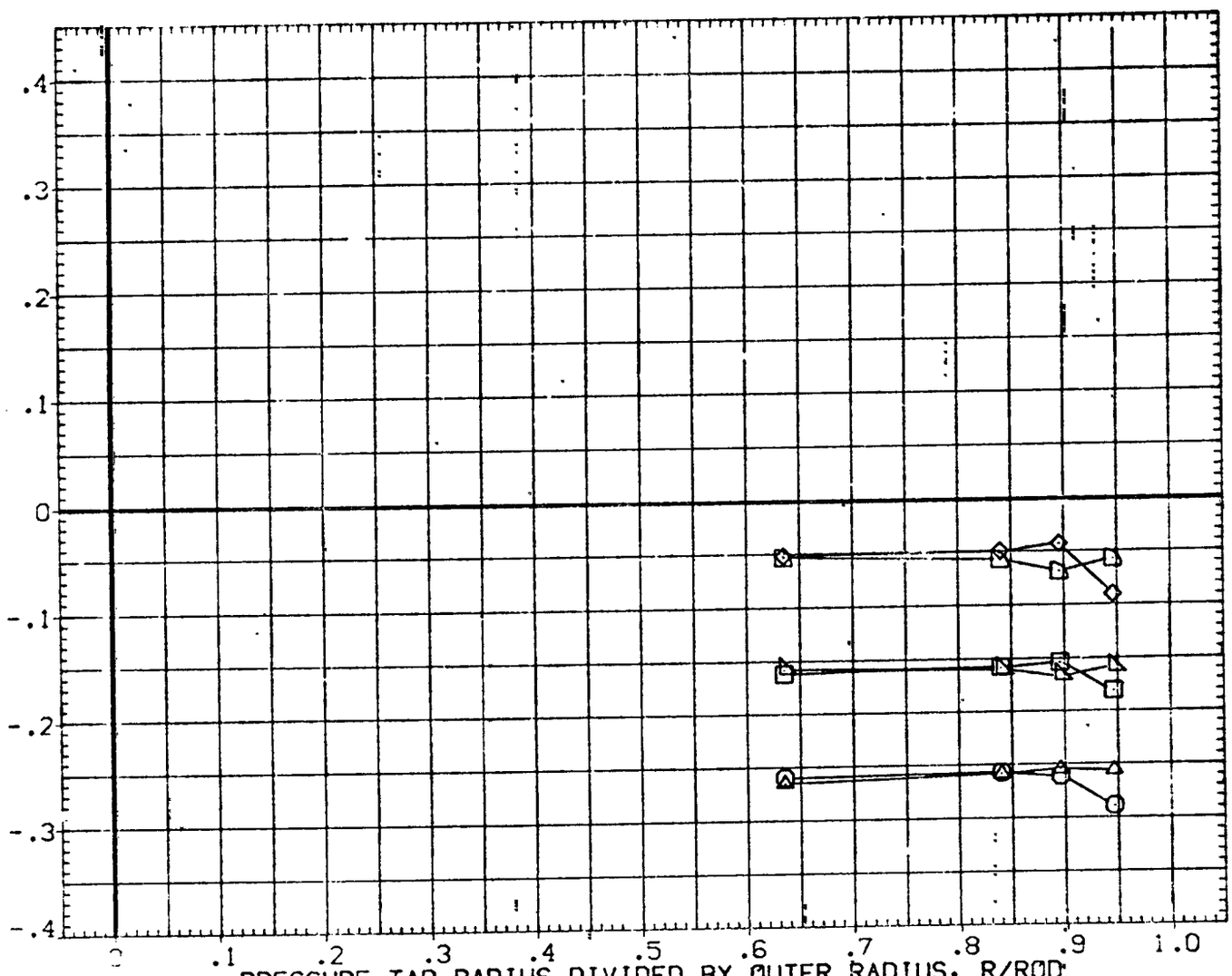


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6H28)	DAVID	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6H30)		ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6H32)		ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6H91)		ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(AE6H92)		ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(AE6H93)		ARC97-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

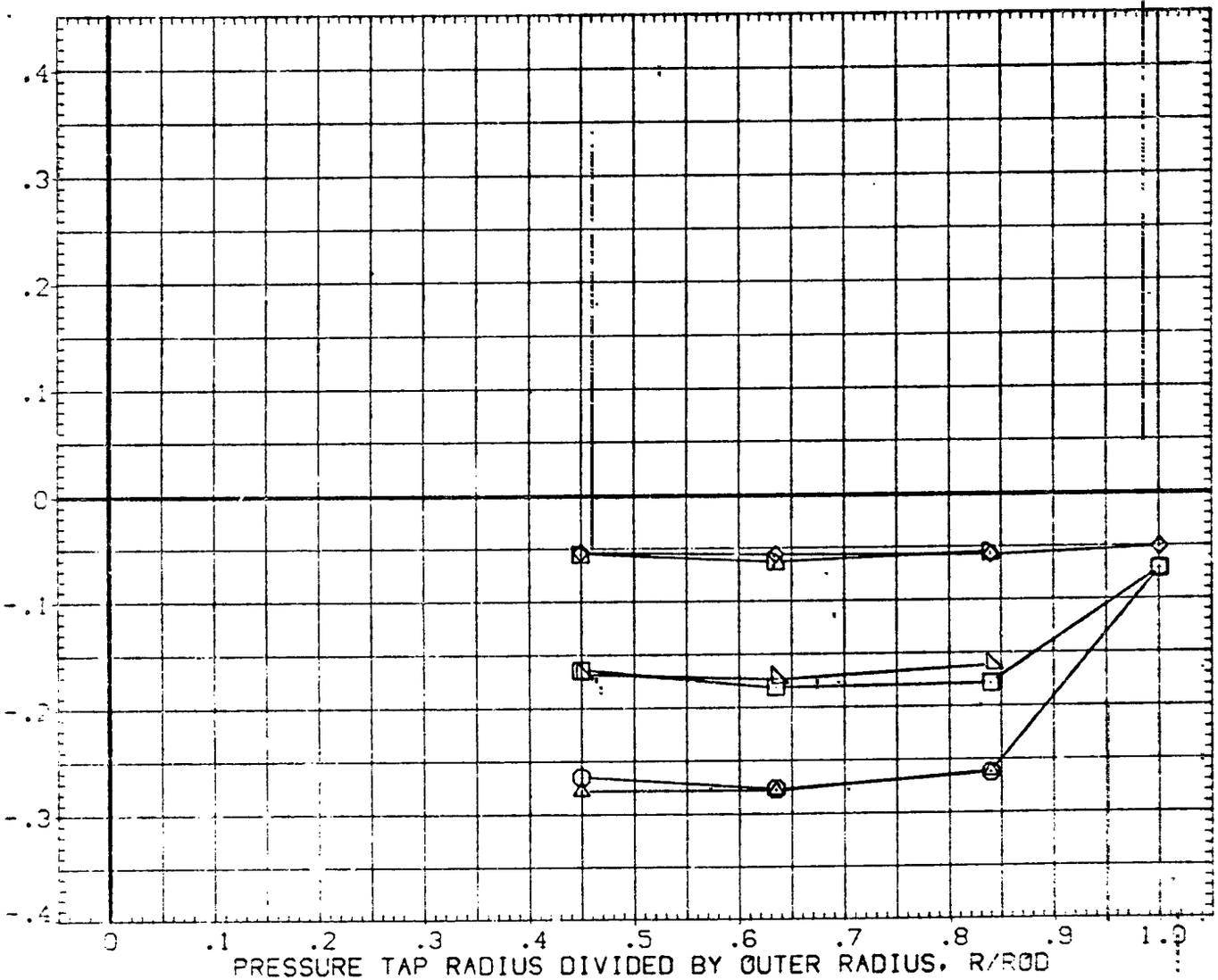


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(BEGH28)		ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BEGH30)		ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BEGH32)		ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BEGH91)		ARC97-044IA92 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BEGH93)		ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BEGH95)		ARC97-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET+BASE--	.000	.000	30.700	1.550

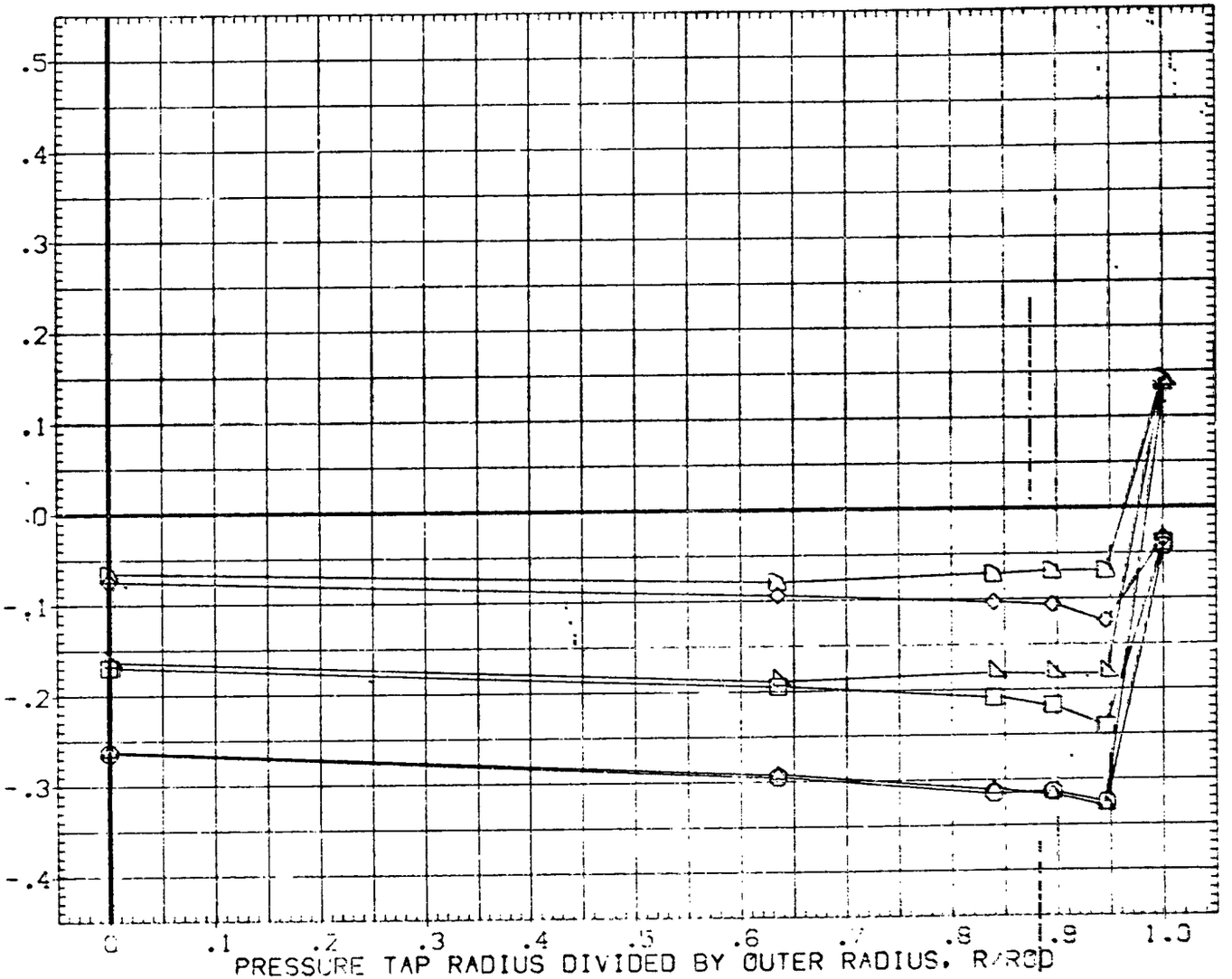


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = .000

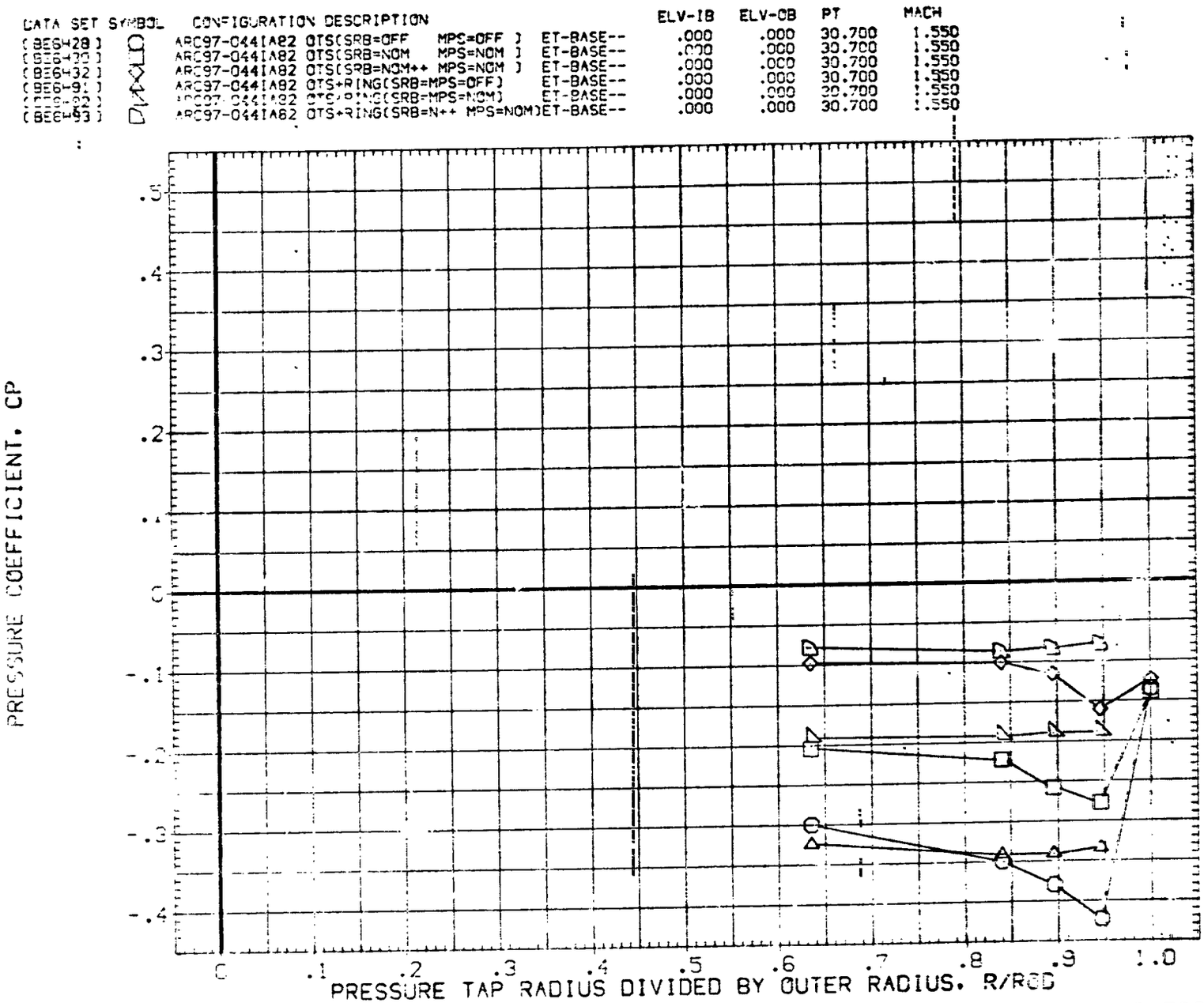


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = 90.000 PAGE 388

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(BE6H28)		AR097-044[A82 OTS SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BE6H30)		AR097-044[A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H32)		AR097-044[A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H91)		AR097-044[A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BE6H92)		AR097-044[A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H93)		AR097-044[A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

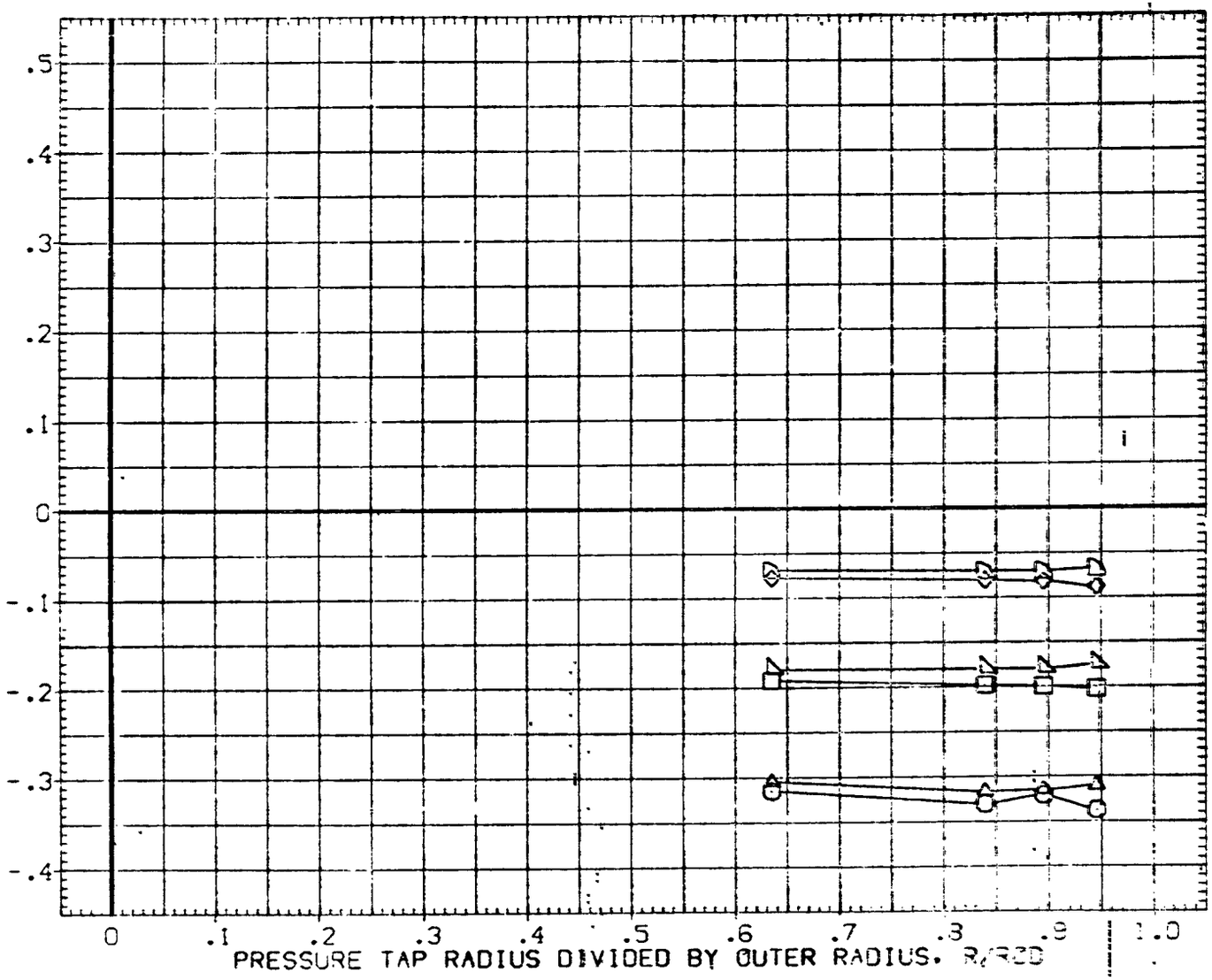


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = 180.000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(BE6H28)	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BE6H30)	ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H32)	ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H91)	ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BE6H92)	ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H93)	ARC97-044IA82 OTS+RING(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

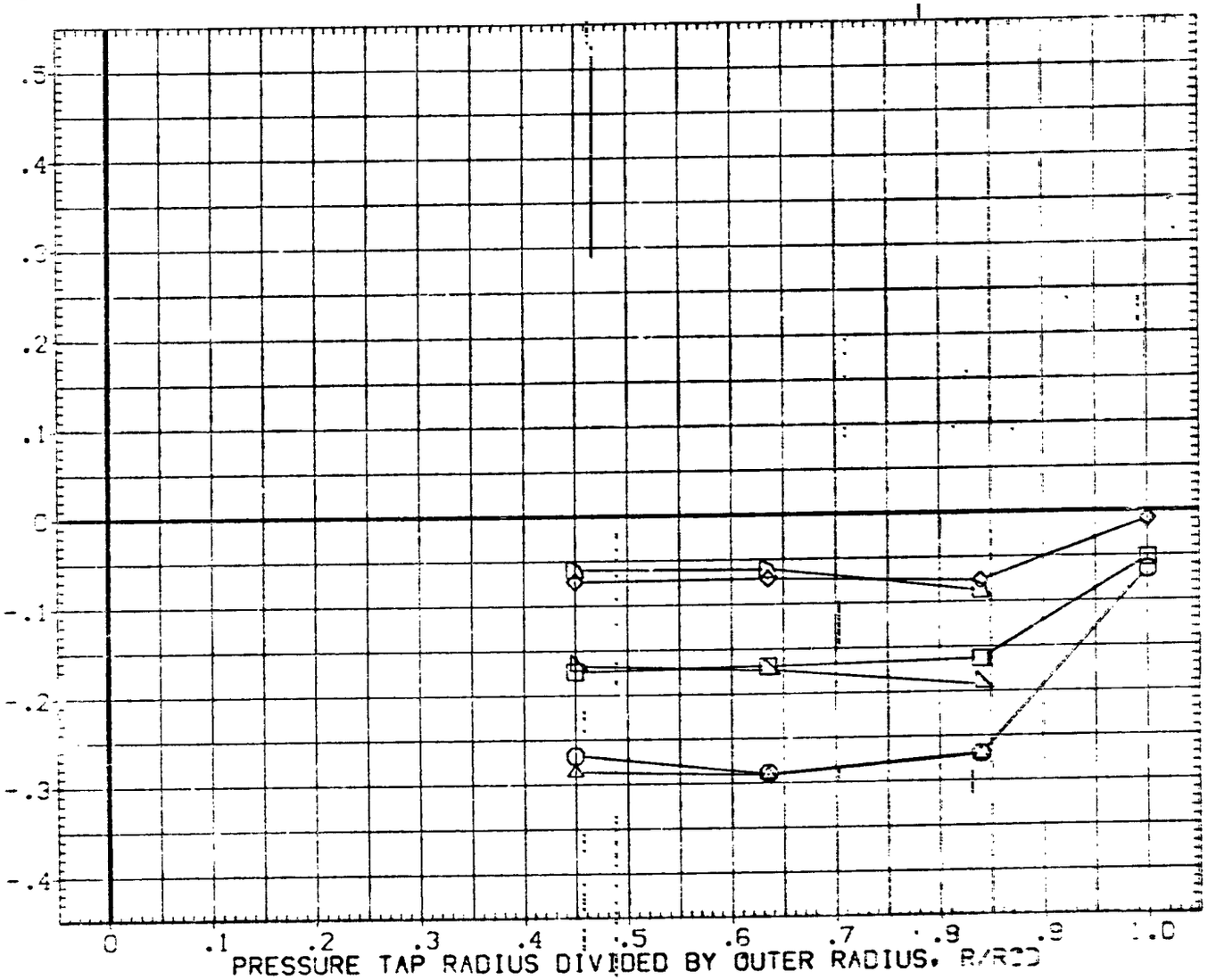


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(8E6H28)	□	ARC97-0441A92 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(8E6H30)	◇	ARC97-0441A92 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(8E6H32)	△	ARC97-0441A92 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(8E6H91)	○	ARC97-0441A92 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(8E6H92)	▽	ARC97-0441A92 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(8E6H93)	⬠	ARC97-0441A92 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

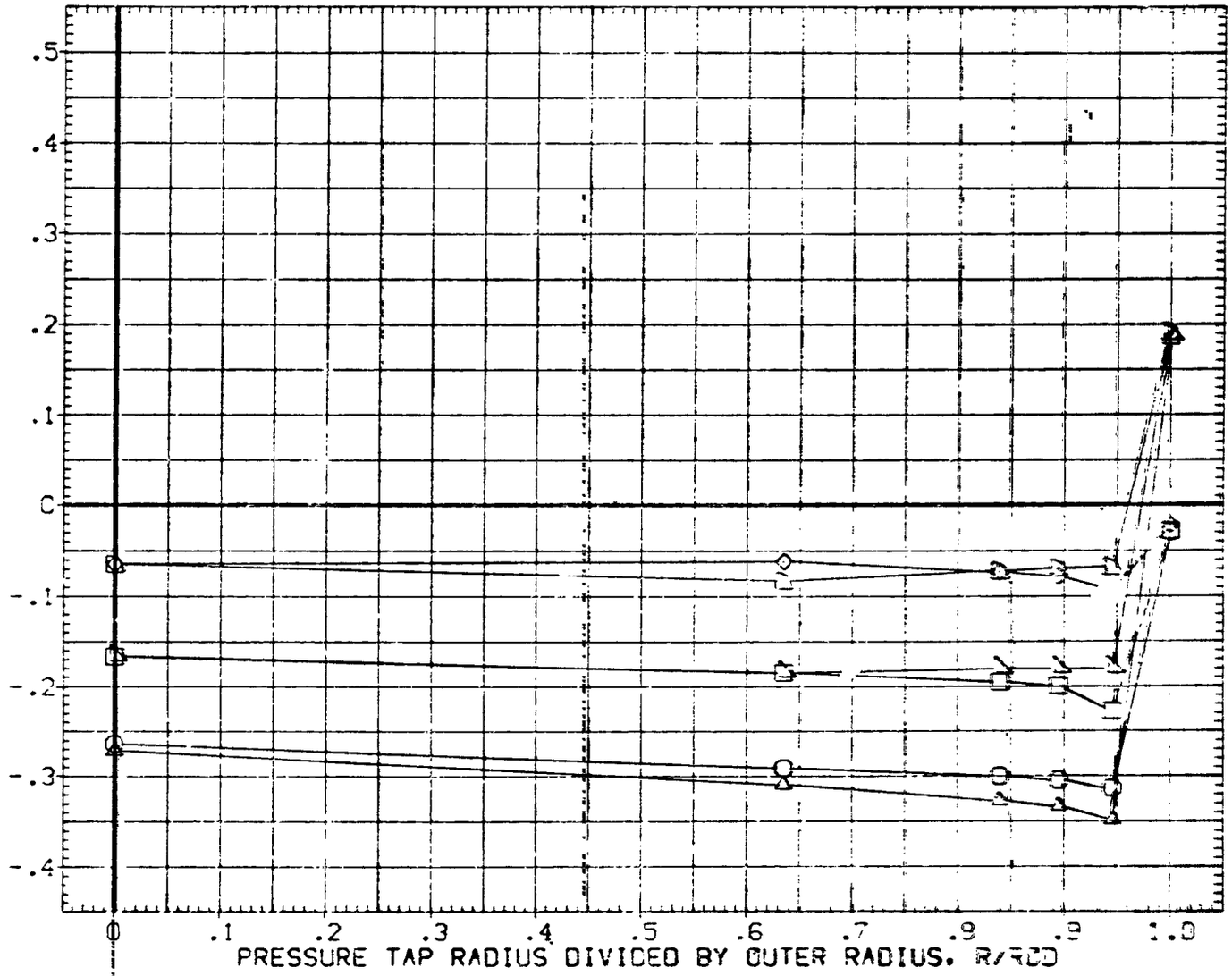


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	RT	MACH
(BE6H-28)	□	AR097-044[A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BE6H-30)		AR097-044[A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H-32)		AR097-044[A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H-31)		AR097-044[A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BE6H-29)		AR097-044[A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BE6H-33)		AR097-044[A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

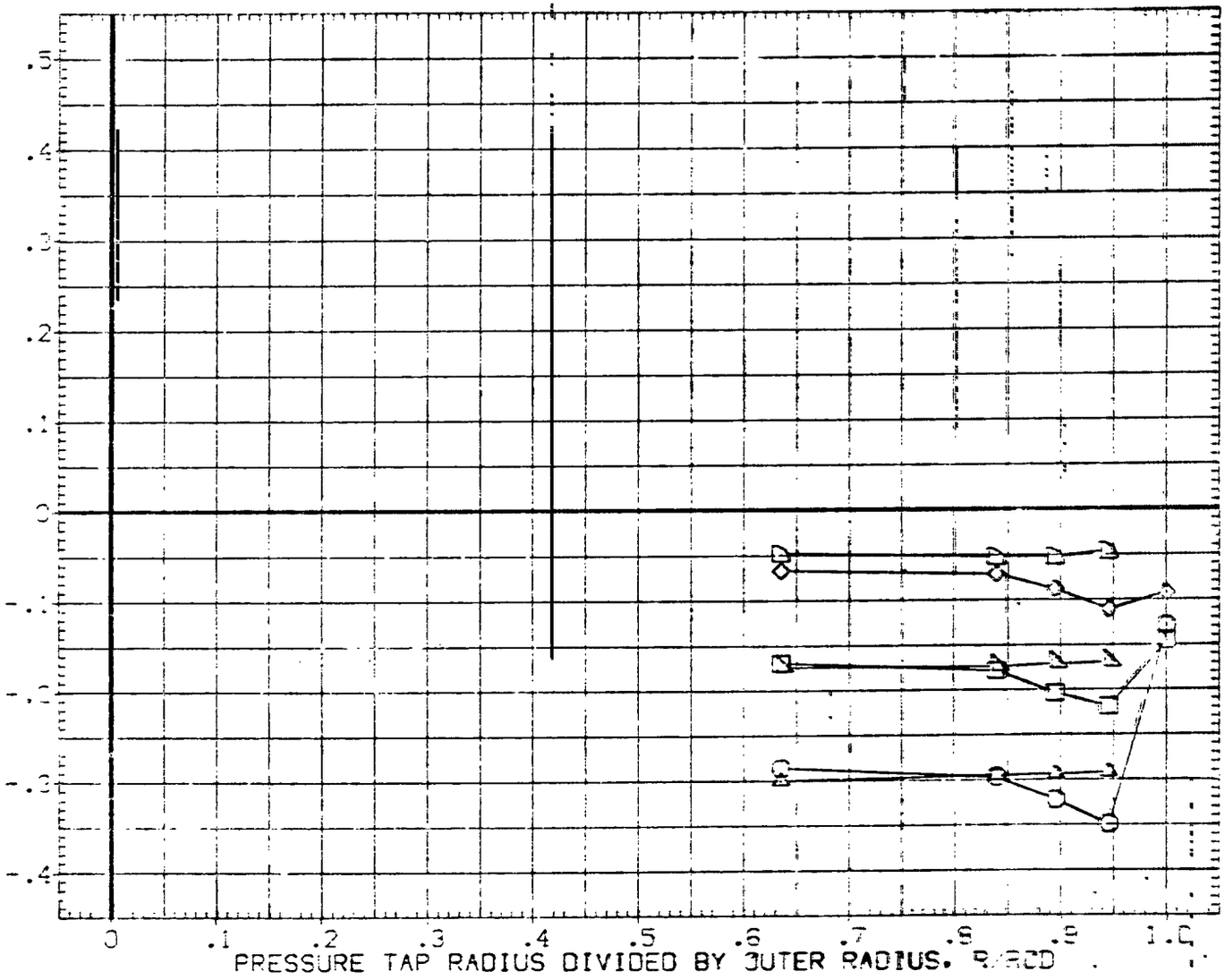


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = 90.000 PAGE 332

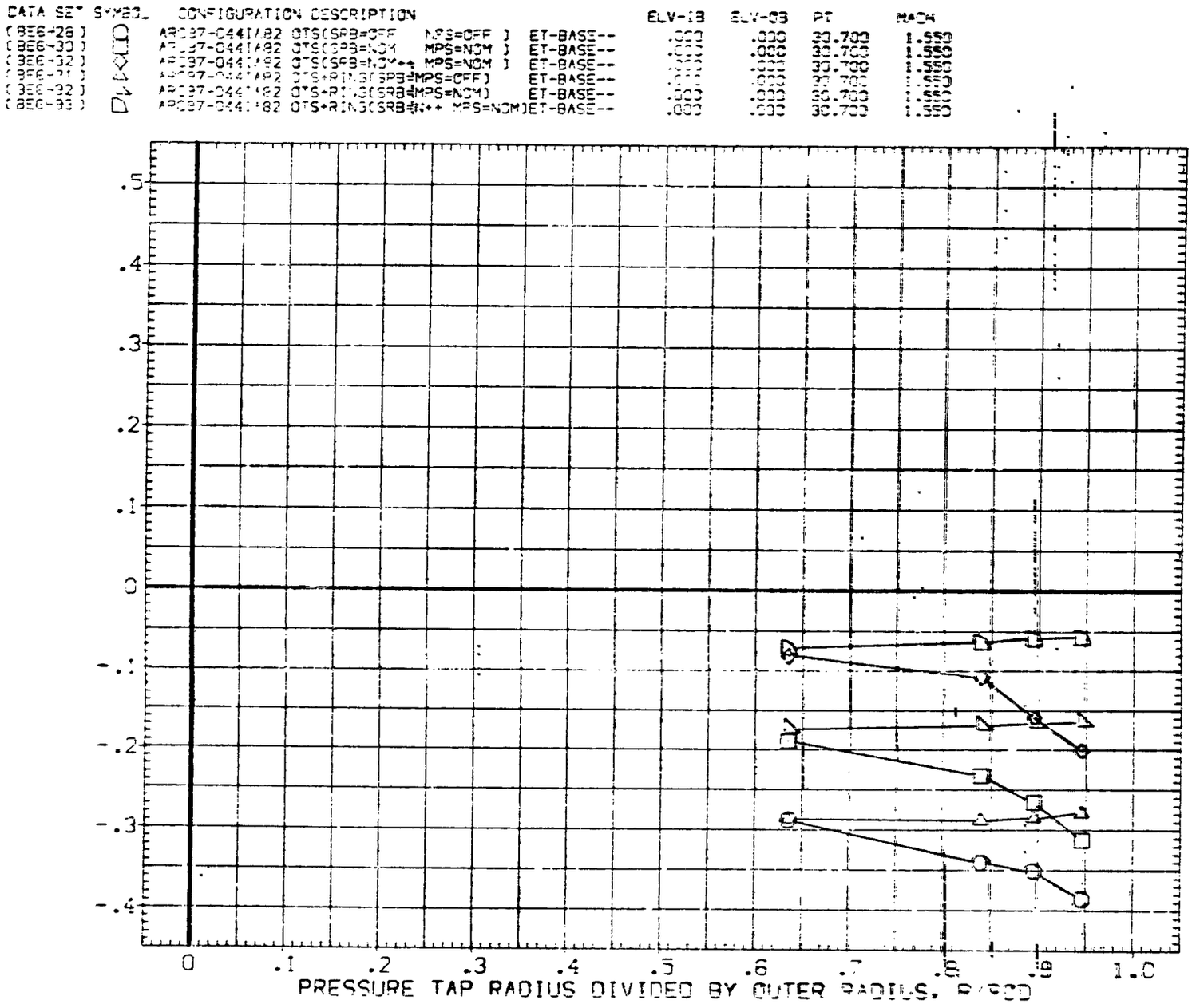


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(BS6-28)		ARC97-044(A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BS6-30)		ARC97-044(A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BS6-32)		ARC97-044(A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BS6-81)		ARC97-044(A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	1.550
(BS6-82)		ARC97-044(A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550
(BS6-83)		ARC97-044(A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	1.550

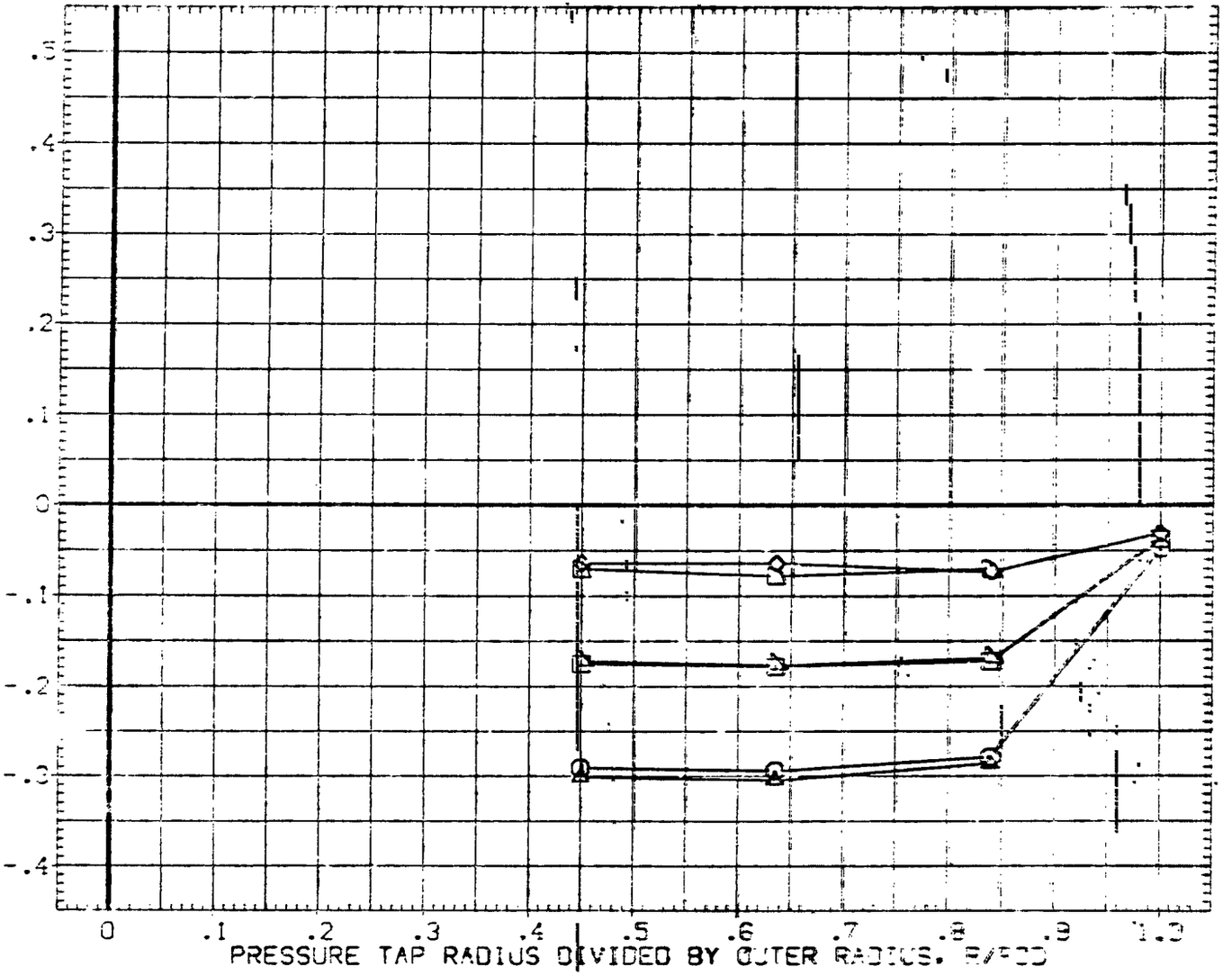


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = 270.000

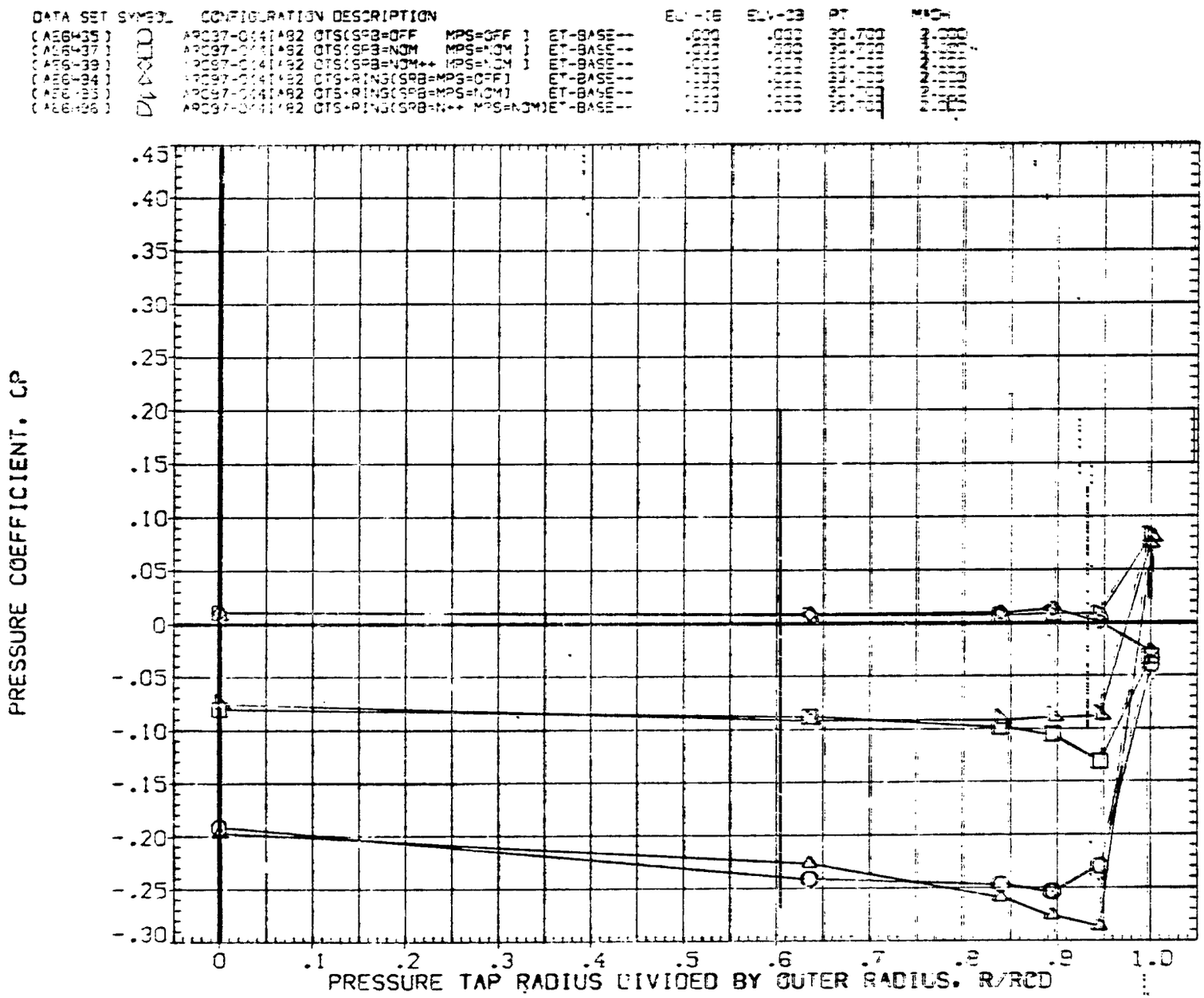


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6H35)	□	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6H37)	◇	ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H39)	△	ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H94)	▷	ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6H95)	◁	ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H96)	▽	ARC97-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

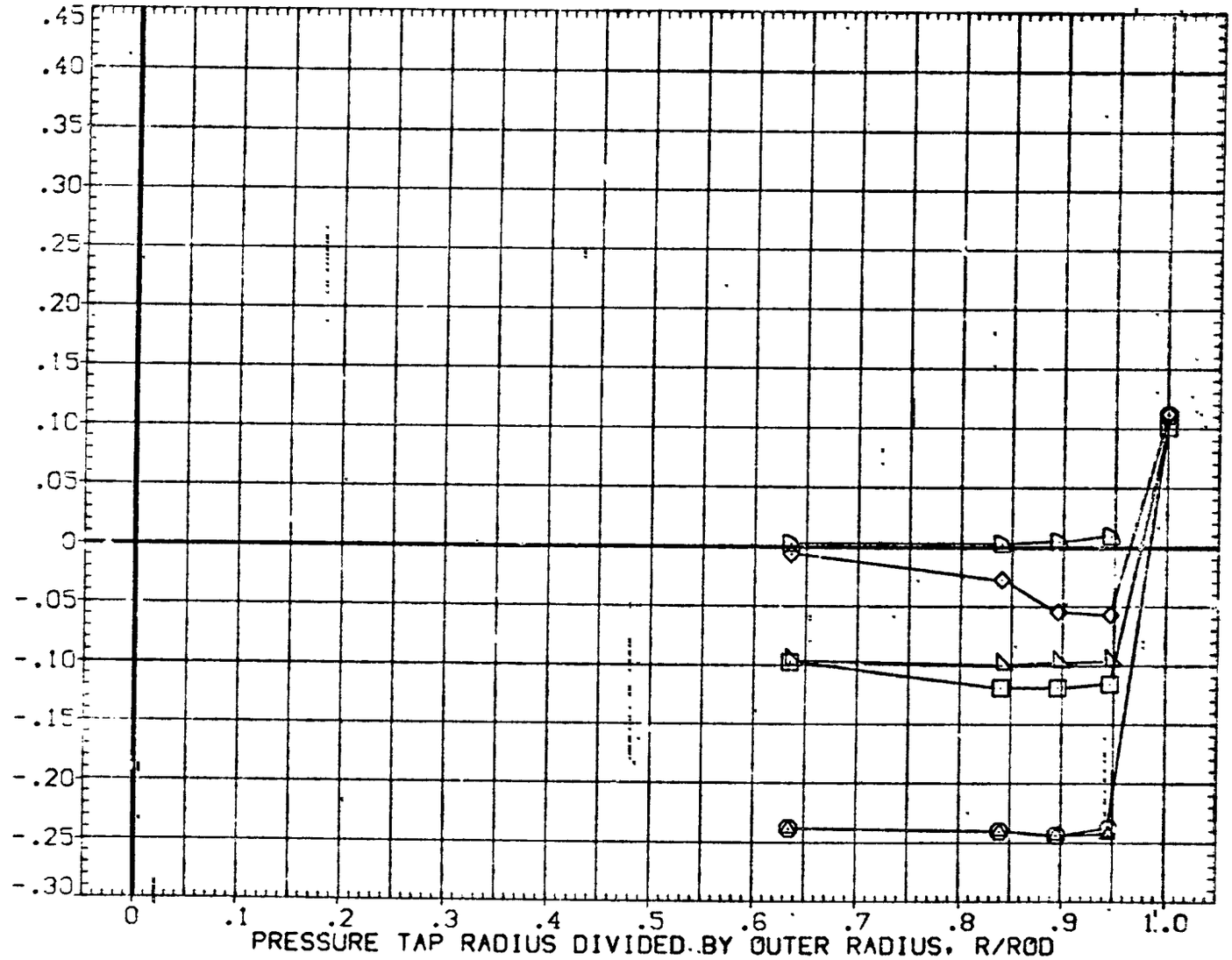


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6H35)	◇	ARC97-044(A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6H37)	□	ARC97-044(A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H39)	△	ARC97-044(A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H34)	◇	ARC97-044(A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6H35)	□	ARC97-044(A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H36)	△	ARC97-044(A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

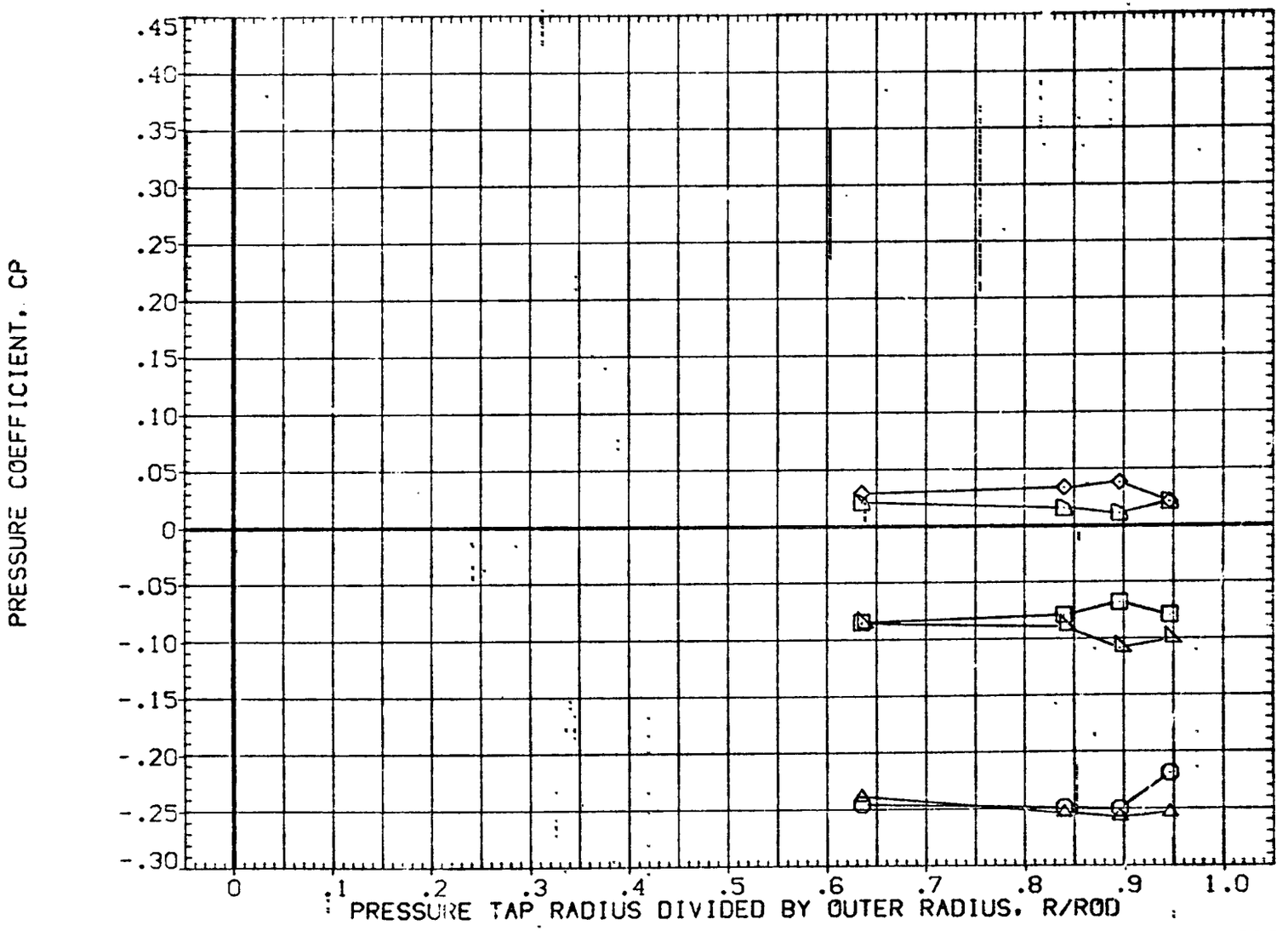


FIG. 119 · EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6435)	□	ARC97-0441A82 OTS(SRB=OFF	MPS=OFF) ET-BASE--	.000	.000	30.700	2.000
(AE6437)	◇	ARC97-0441A82 OTS(SRB=NOM	MPS=NOM) ET-BASE--	.000	.000	30.700	2.000
(AE6439)	△	ARC97-0441A82 OTS(SRB=NOM++	MPS=NOM) ET-BASE--	.000	.000	30.700	2.000
(AE6434)	▷	ARC97-0441A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6435)	○	ARC97-0441A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6436)	▽	ARC97-0441A82 OTS+RING(SRB=N++	MPS=NOM)ET-BASE--	.000	.000	30.700	2.000

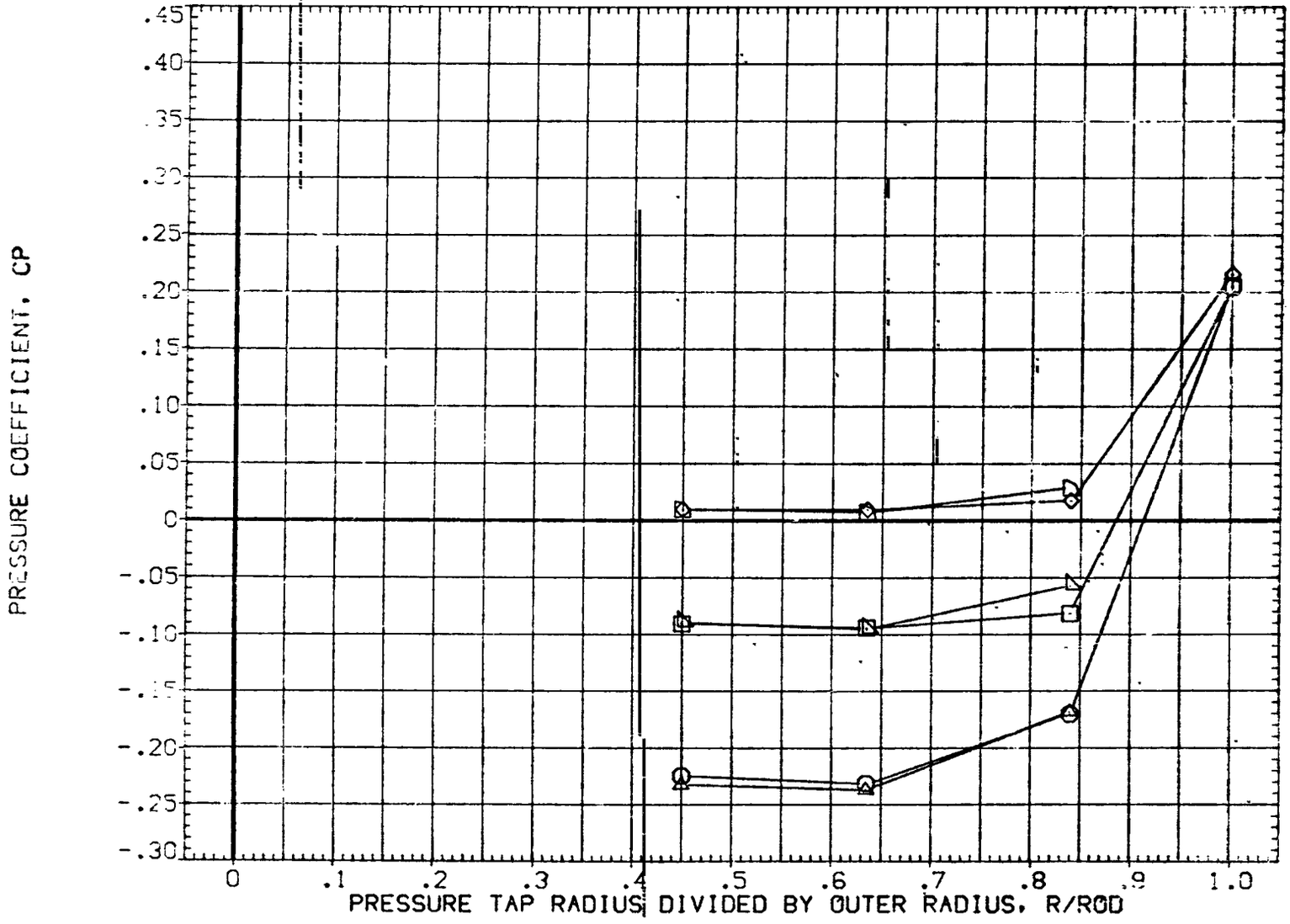


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 PHI = 270.000

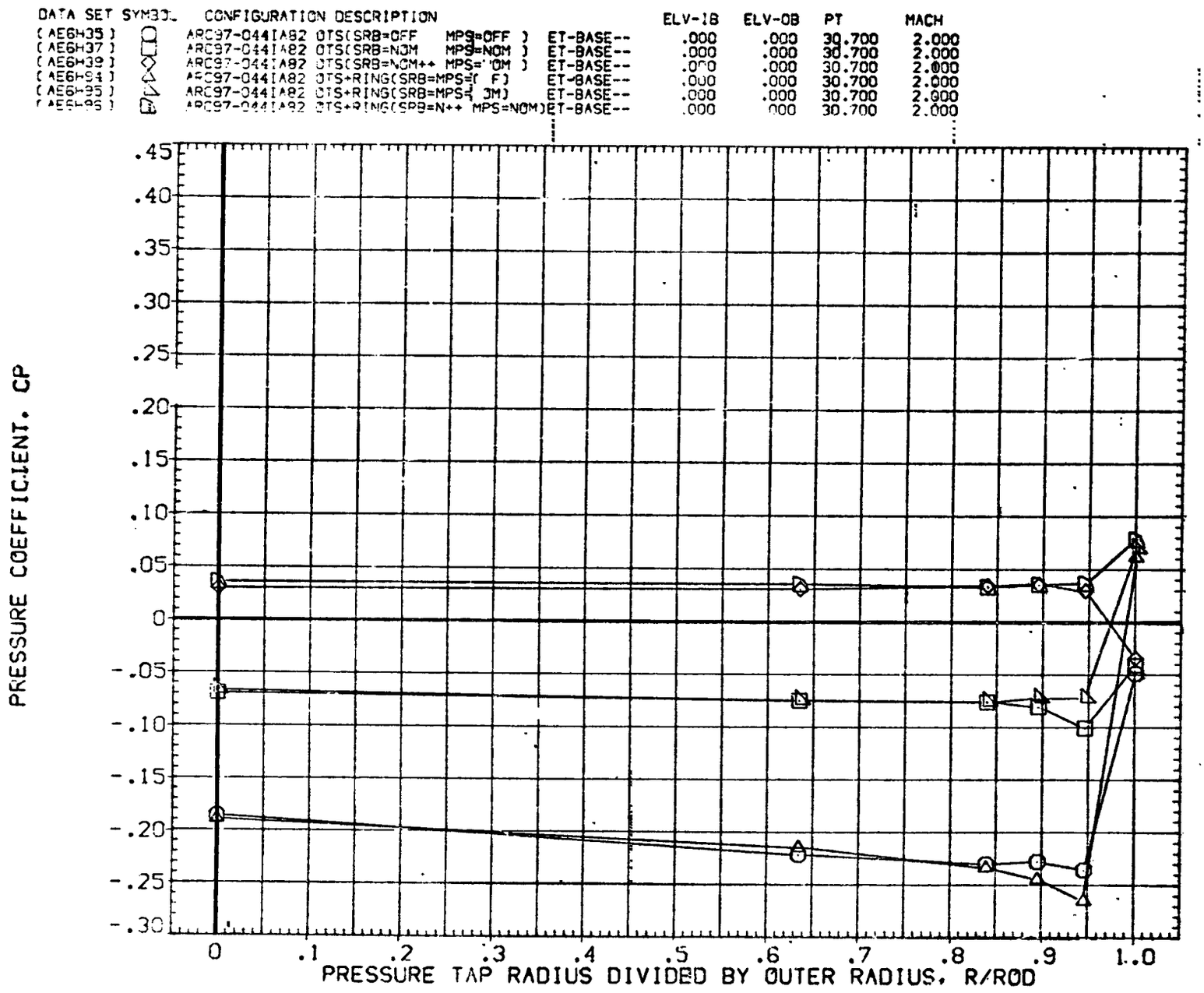


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(ABBH35)	□	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(ABBH37)	◇	ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(ABBH39)	△	ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(ABBH41)	▽	ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(ABBH85)	▷	ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(ABBH88)	◁	ARC97-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

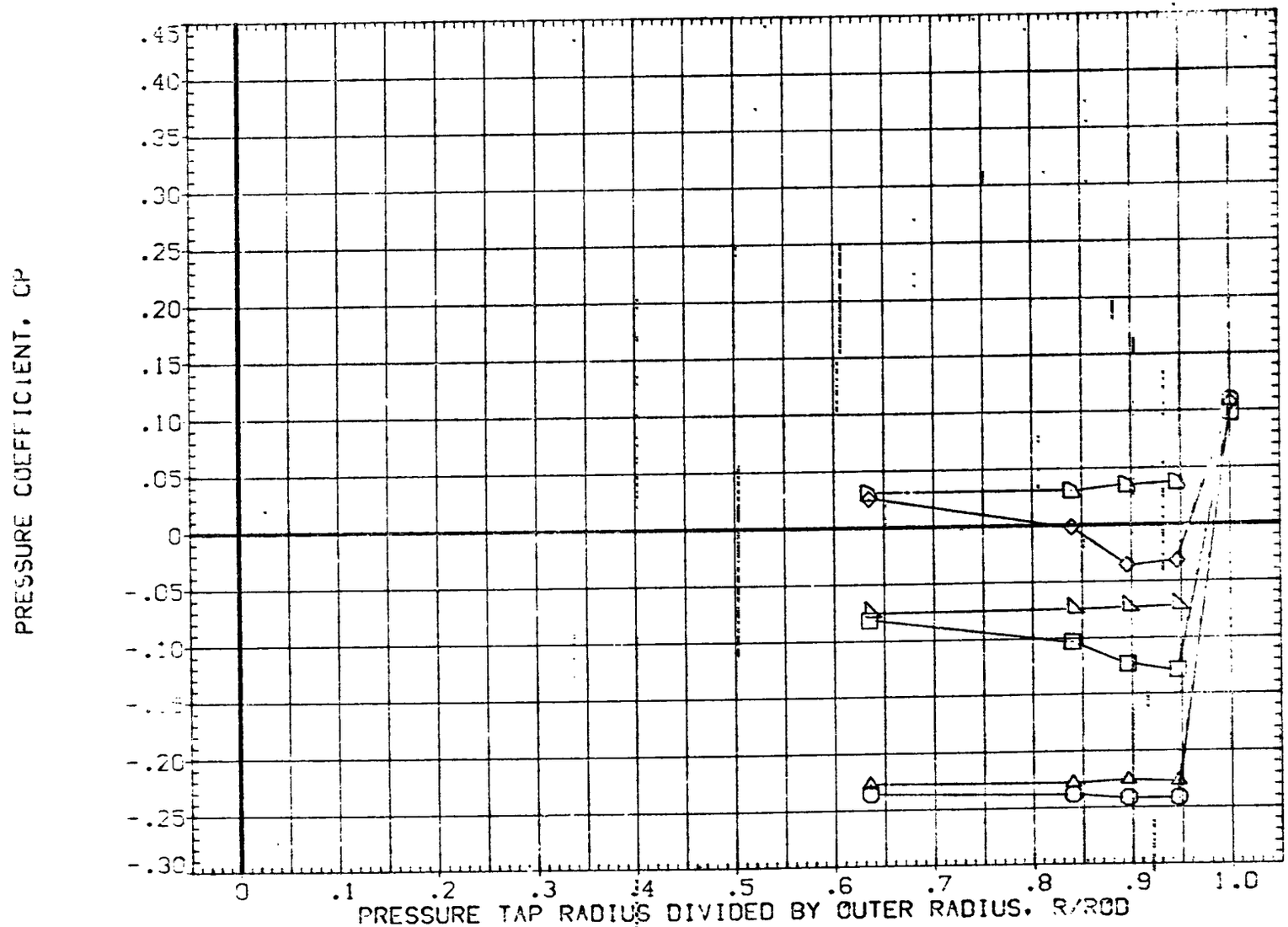


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6H35)		ARC37-044IA02 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6H37)		ARC37-044IA02 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H39)		ARC37-044IA02 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H34)		ARC37-044IA02 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6H38)		ARC37-044IA02 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6H36)		ARC37-044IA02 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

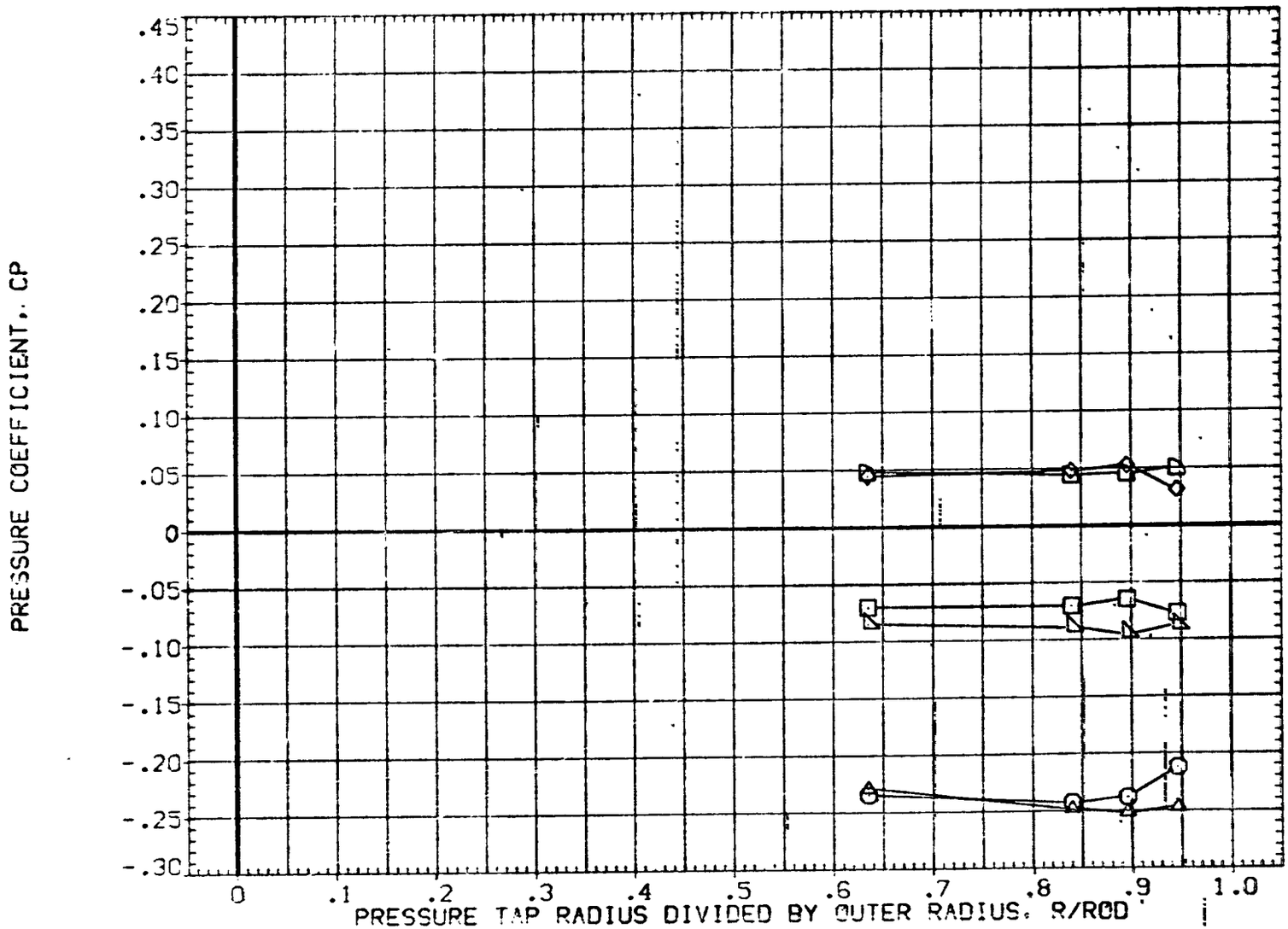


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = 180.000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
	ARC97-044[A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
	ARC97-044[A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
	ARC97-044[A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
	ARC97-044[A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
	ARC97-044[A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
	ARC97-044[A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

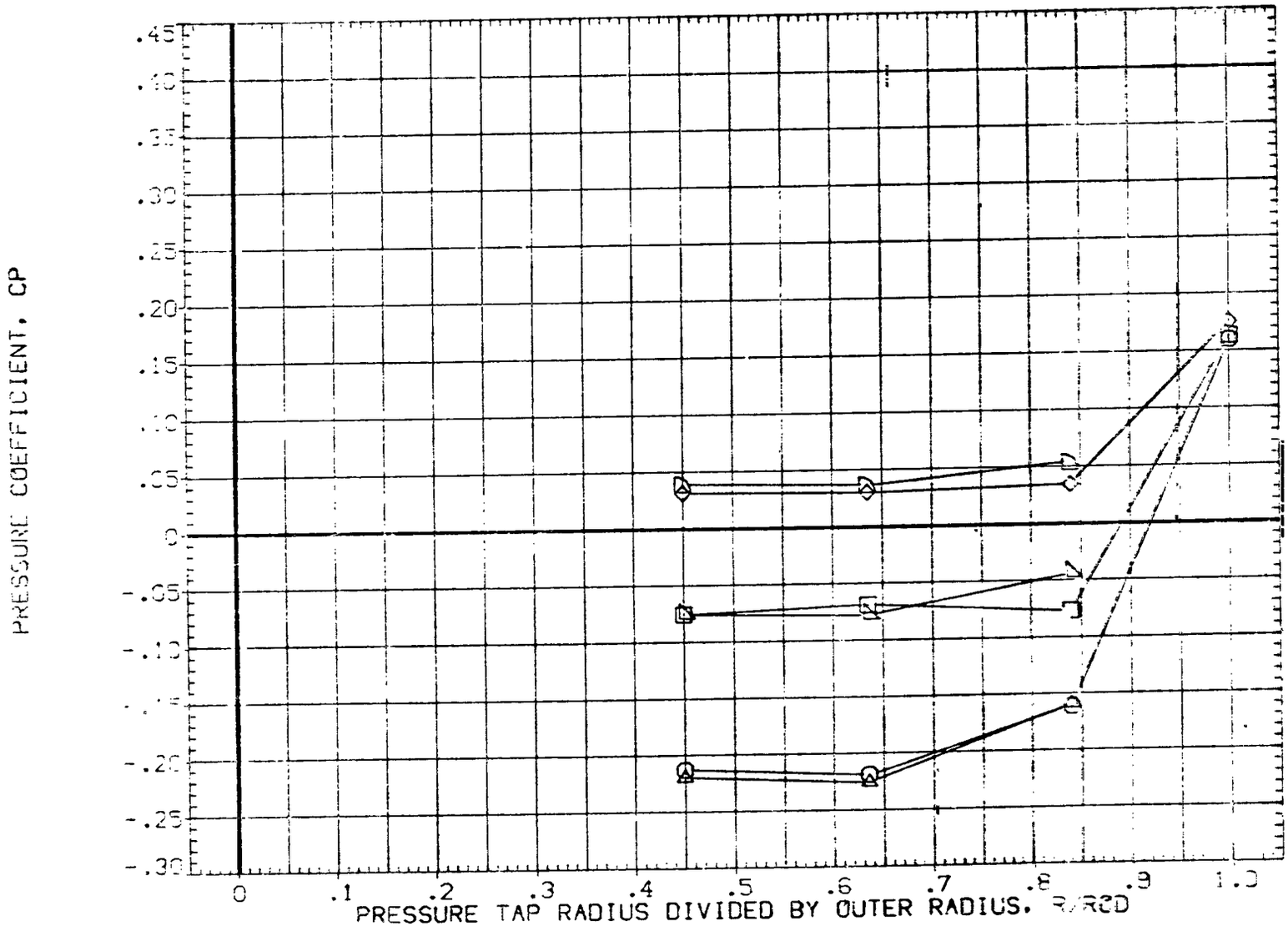


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	PT	MACH
(AE6H35)		ARC97-044[A82 OTS(SRB=OFF MPS=OFF) ET-BASE--	.000	.000	30.700	2.000
(AE6H37)		ARC97-044[A82 OTS(SRB=NOM MPS=NOM) ET-BASE--	.000	.000	30.700	2.000
(AE6H39)		ARC97-044[A82 OTS(SRB=NOM++ MPS=NOM) ET-BASE--	.000	.000	30.700	2.000
(AE6H36)		ARC97-044[A82 OTS+RING(SRB=MPS=OFF) ET-BASE--	.000	.000	30.700	2.000
(AE6H38)		ARC97-044[A82 OTS+RING(SRB=MPS=NOM) ET-BASE--	.000	.000	30.700	2.000
(AE6H40)		ARC97-044[A82 OTS+RING(SRB=NOM++ MPS=NOM)ET-BASE--	.000	.000	30.700	2.000

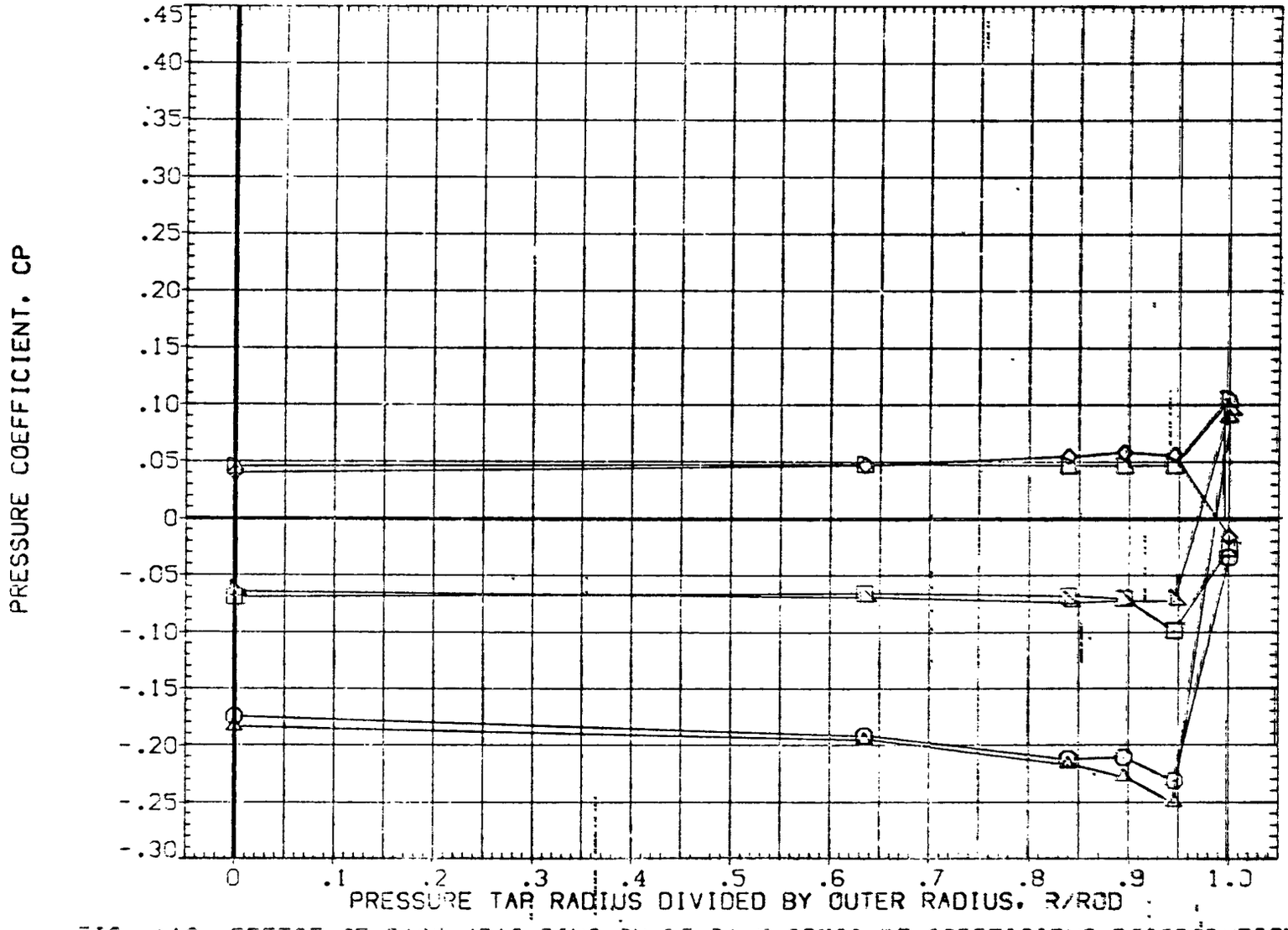


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = .000

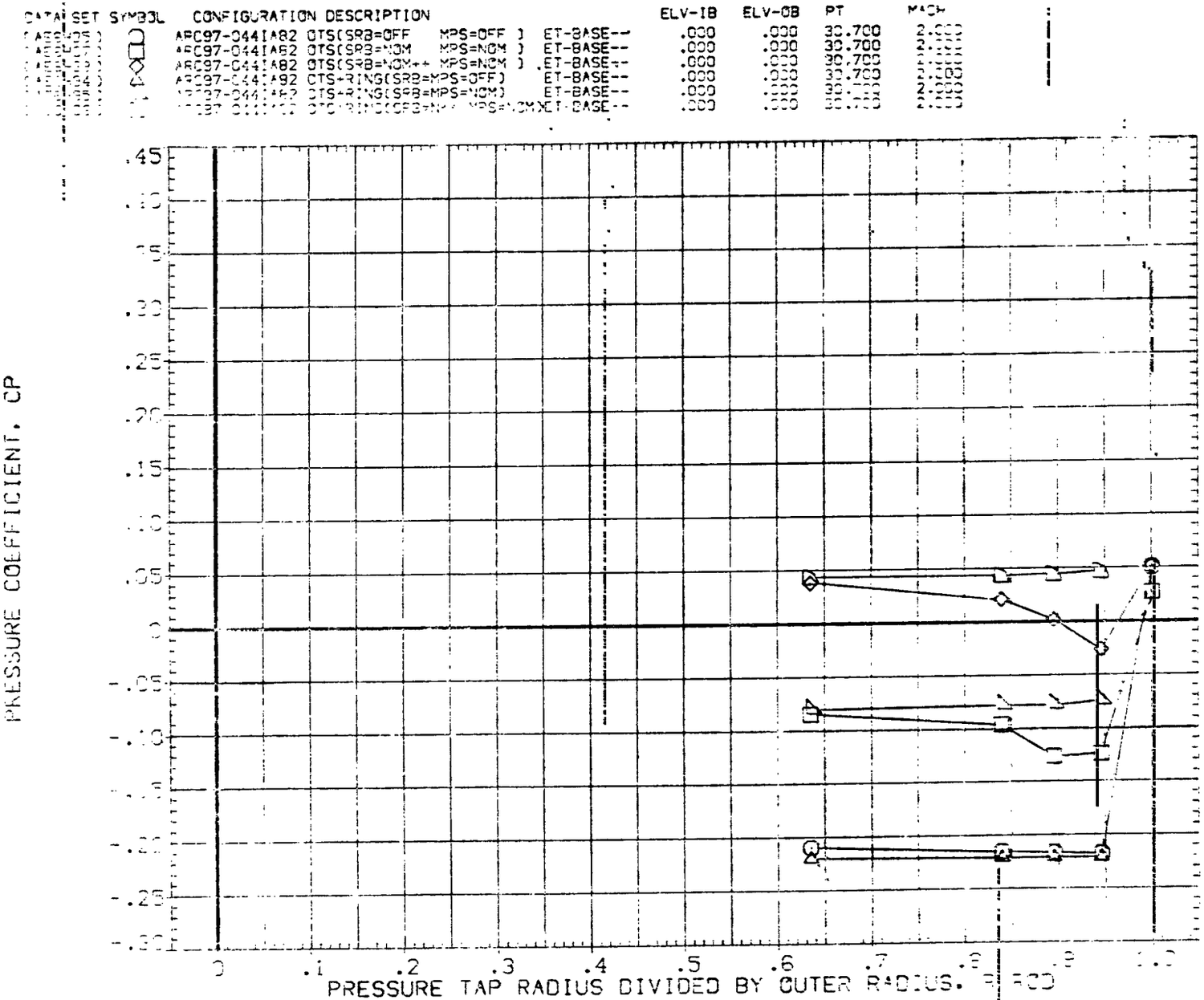


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6435)		AR037-044[A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6437)		AR037-044[A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6439)		AR037-044[A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6434)		AR037-044[A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(AE6435)		AR037-044[A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(AE6436)		AR037-044[A82 OTS+RING(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

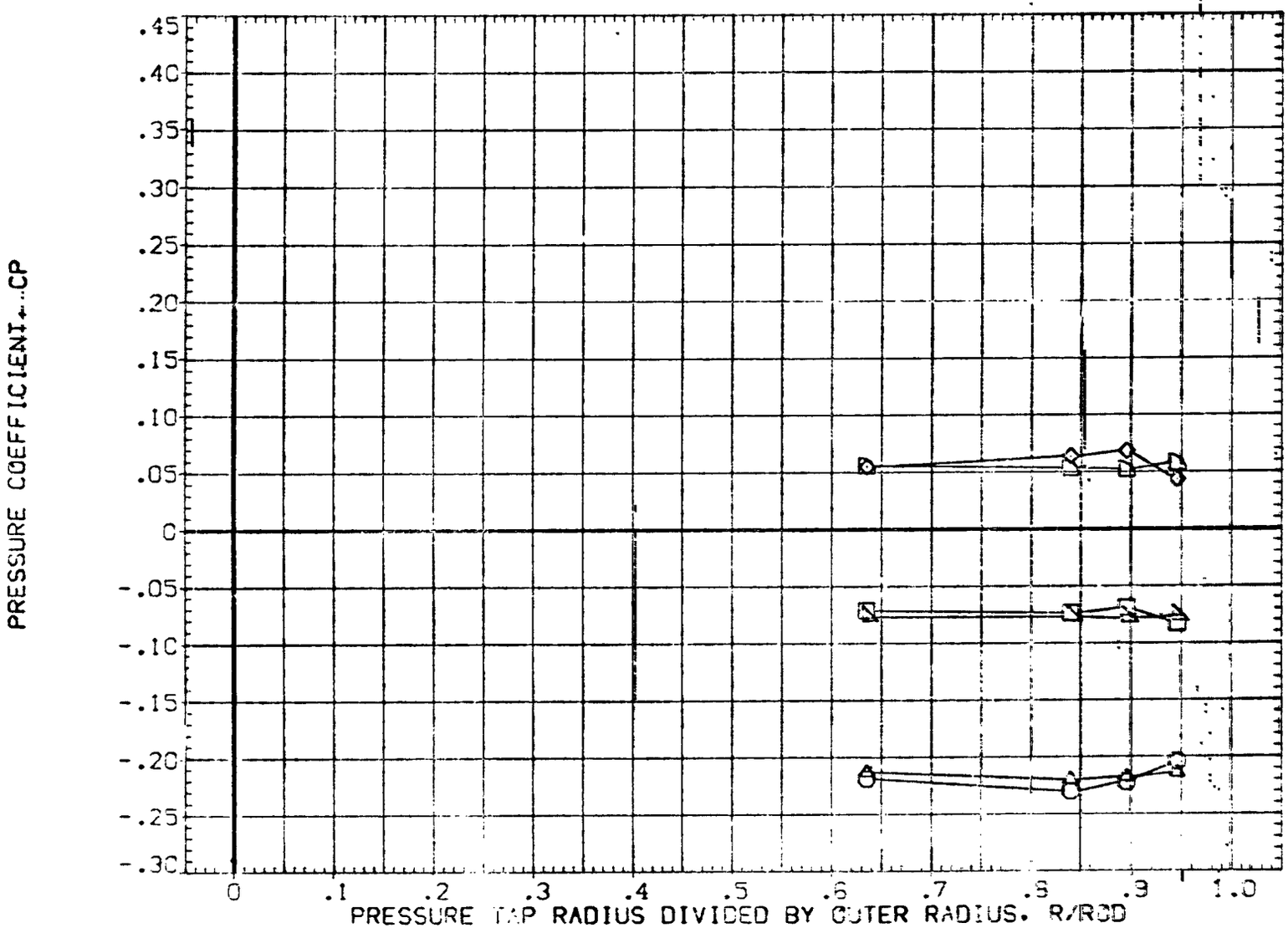


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 180.000 PAGE 705

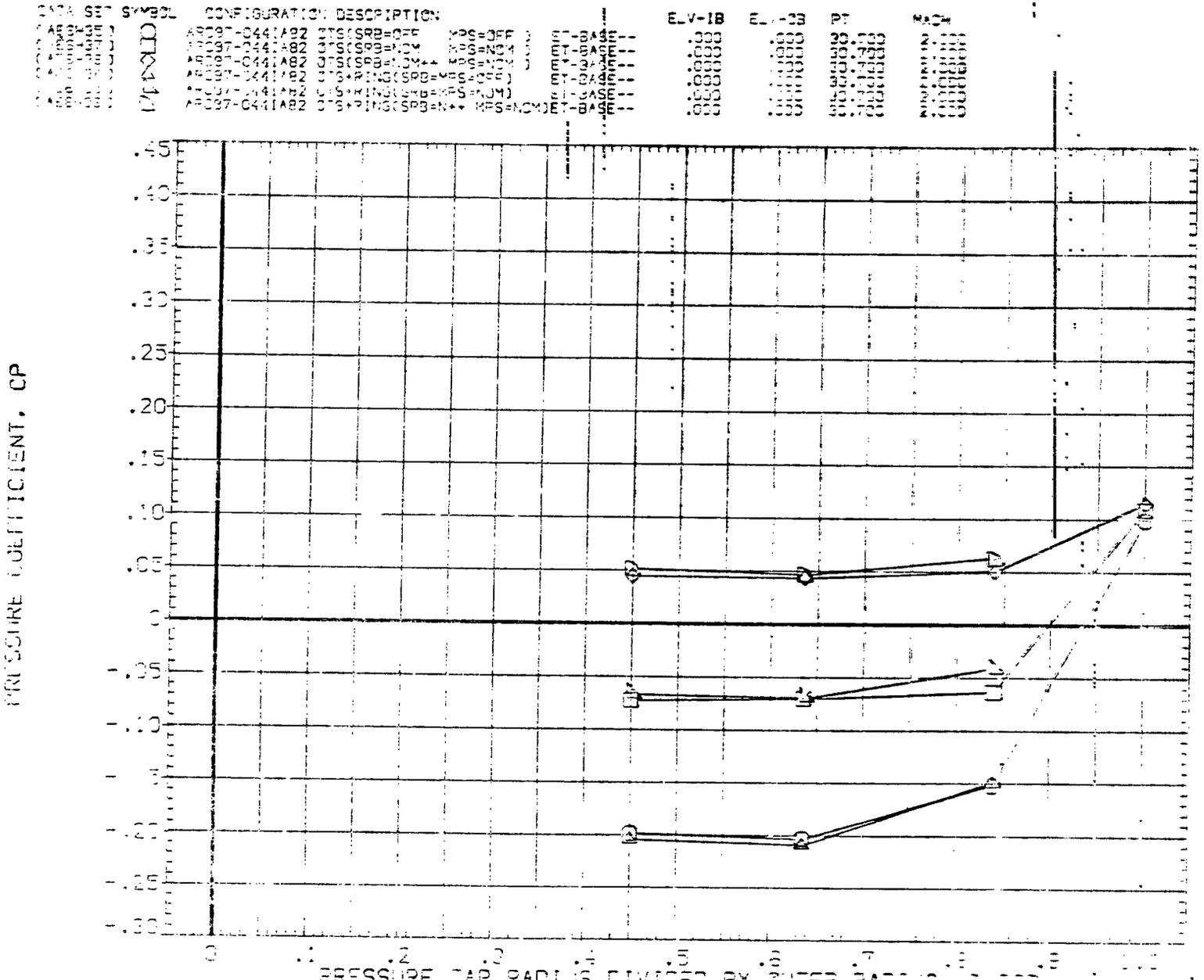


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE DISTRIBUTION - SYSTEM TEST

ALPHA = 4.00 BETA = .000 MACH = 2.500

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	PT	MACH
(illegible)	APC97-0441A82 OTS(SRB=OFF MPS=OFF) ET-BASE--	.000	.000	20.700	.900
(illegible)	APC97-0441A82 OTS(SRB=NOM MPS=NOM) ET-BASE--	.000	.000	20.700	.900
(illegible)	APC97-0441A82 OTS(SRB=NOM++ MPS=NOM) ET-BASE--	.000	.000	20.700	.900
(illegible)	APC97-0441A82 OTS+RING(SRB=MPS=OFF) ET-BASE--	.000	.000	20.700	.900
(illegible)	APC97-0441A82 OTS+RING(SRB=MPS=NOM) ET-BASE--	.000	.000	20.700	.900
(illegible)	APC97-0441A82 OTS+RING(SRB=N++ MPS=NOM)ET-BASE--	.000	.000	20.700	.900

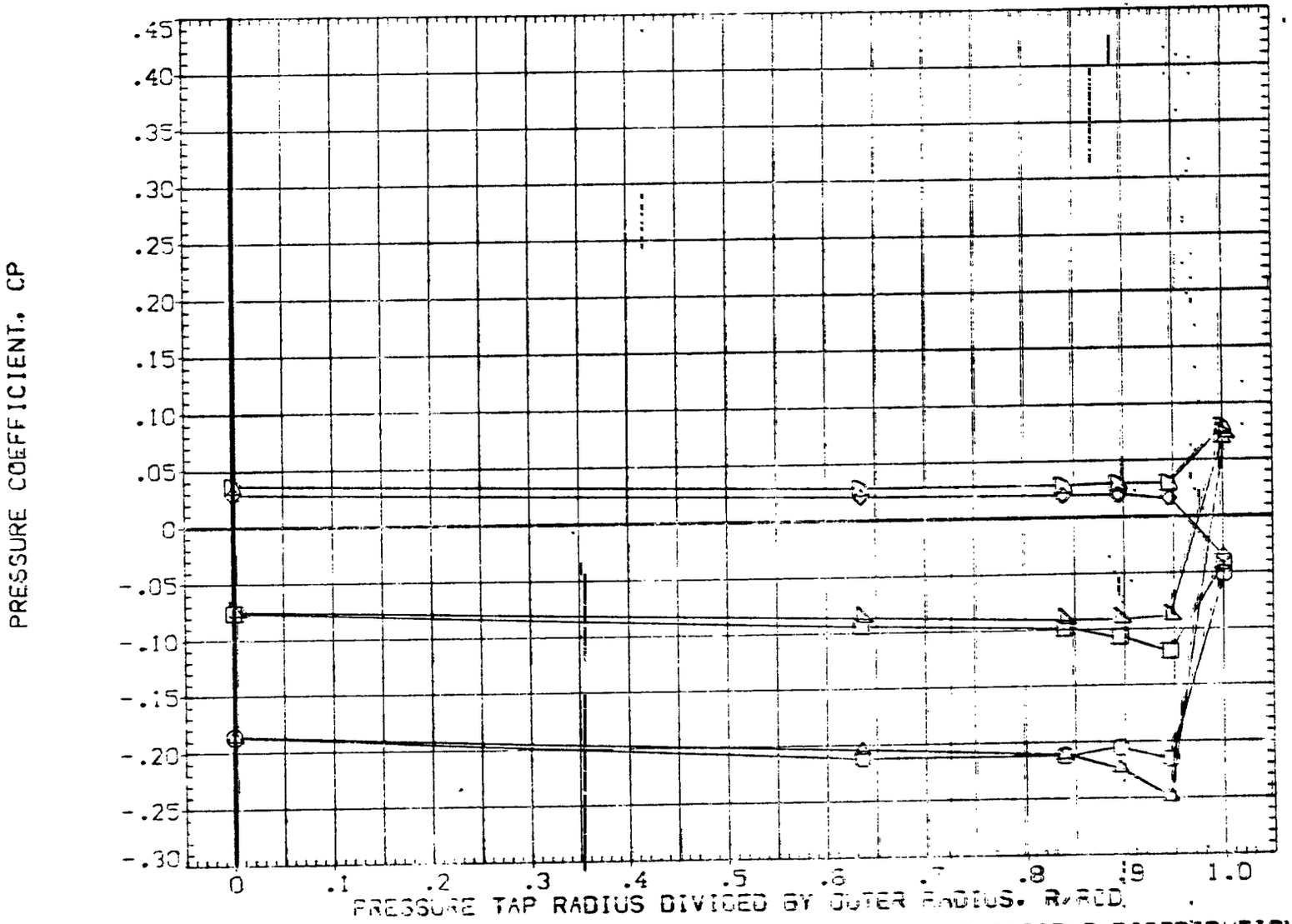


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = .000

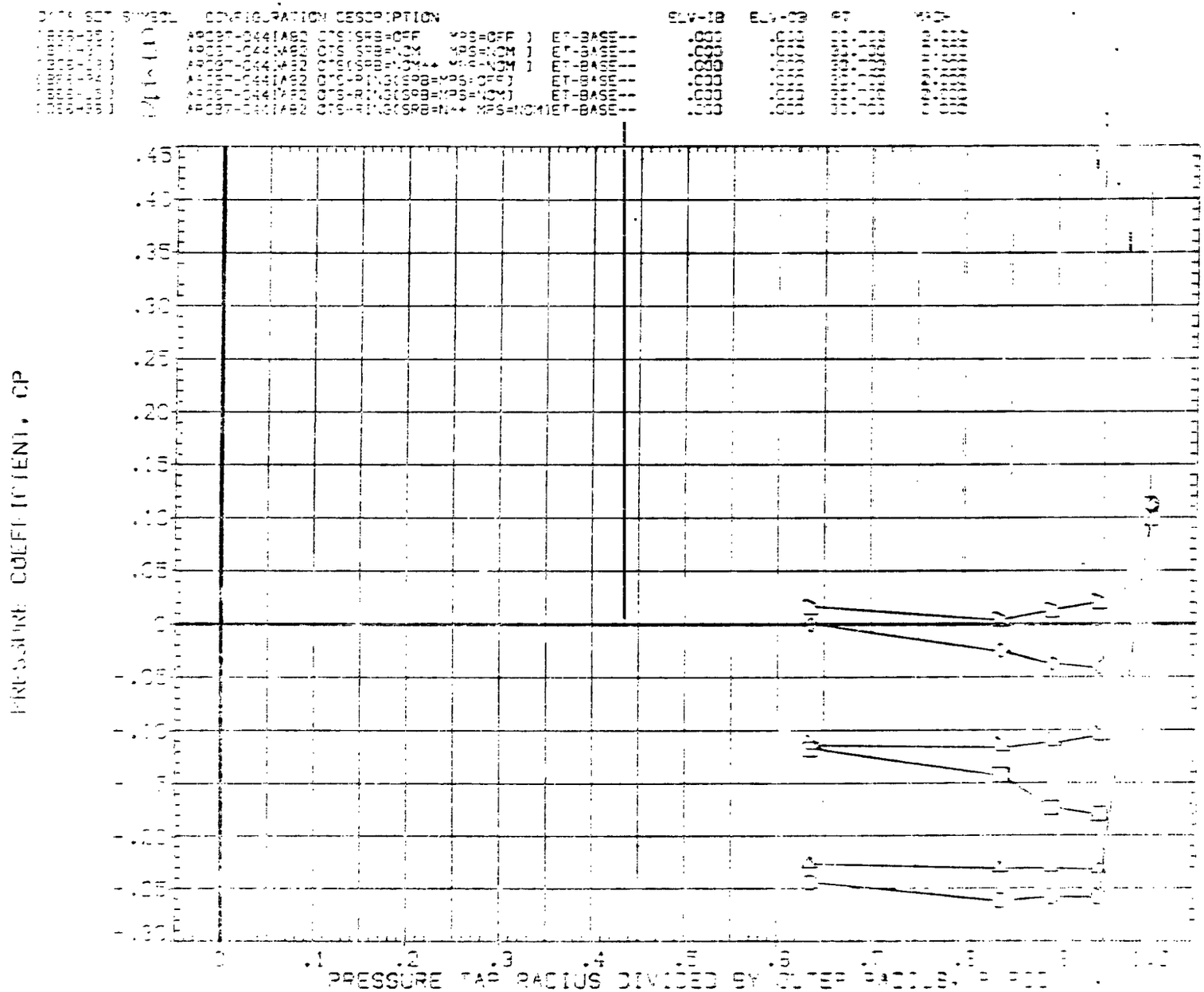


FIG. 116 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE DISTRIBUTION AT SUBSONIC MACH

ALPHA = .000 BETA = -4.000 MACH = 0.600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	RT	MACH
(BE6435)	□	AP097-044[A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(BE6437)	○	AP097-044[A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(BE6439)	△	AP097-044[A82 OTS(SRB=NOM+ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(BE6434)	◇	AP097-044[A82 OTS RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(BE6435)	▽	AP097-044[A82 OTS RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(BE6436)	◁	AP097-044[A82 OTS RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

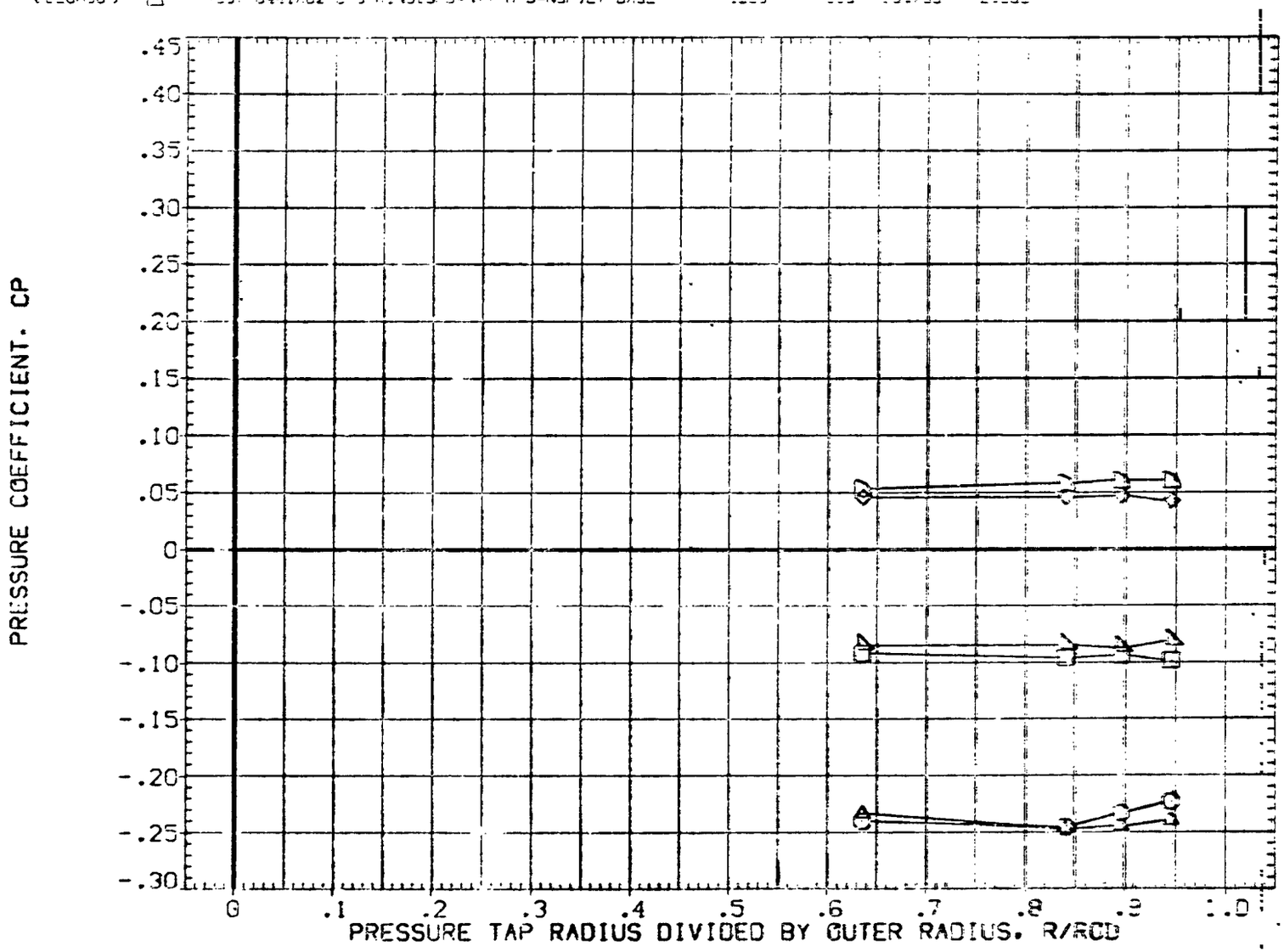


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = 180.000 PAGE 700

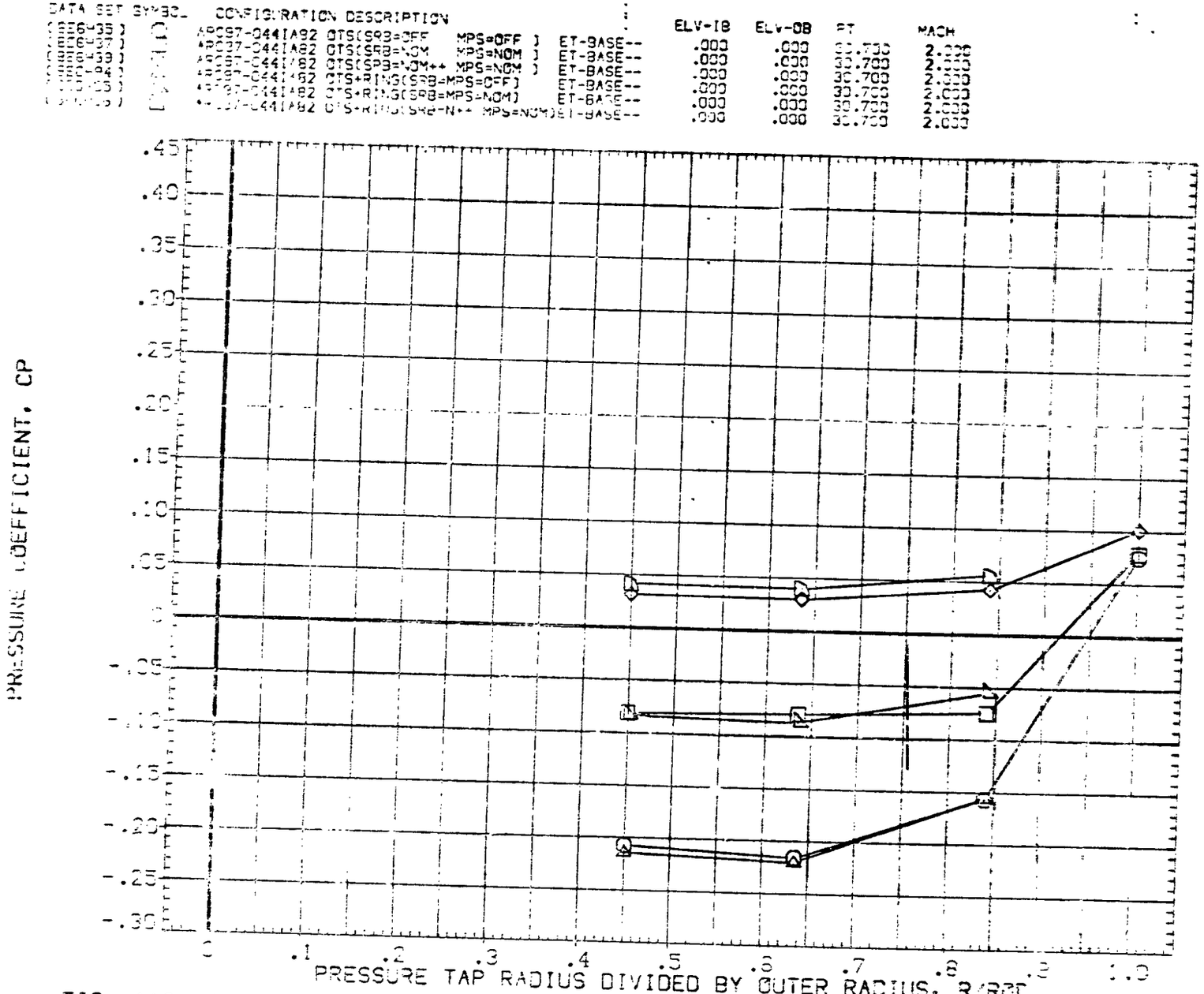


FIG. 113 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(8886-35)		AP297-044[A82 OTS(SRB=OFF	MPS=OFF) ET-BASE--	.000	.000	30.700	2.000
(8886-37)		AP297-044[A82 OTS(SRB=NOM	MPS=NOM) ET-BASE--	.000	.000	30.700	2.000
(8886-38)		AP297-044[A82 OTS(SRB=NOM++	MPS=NOM) ET-BASE--	.000	.000	30.700	2.000
(8886-34)		AP297-044[A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(8886-36)		AP297-044[A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(8886-39)		AP297-044[A82 OTS+RING(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

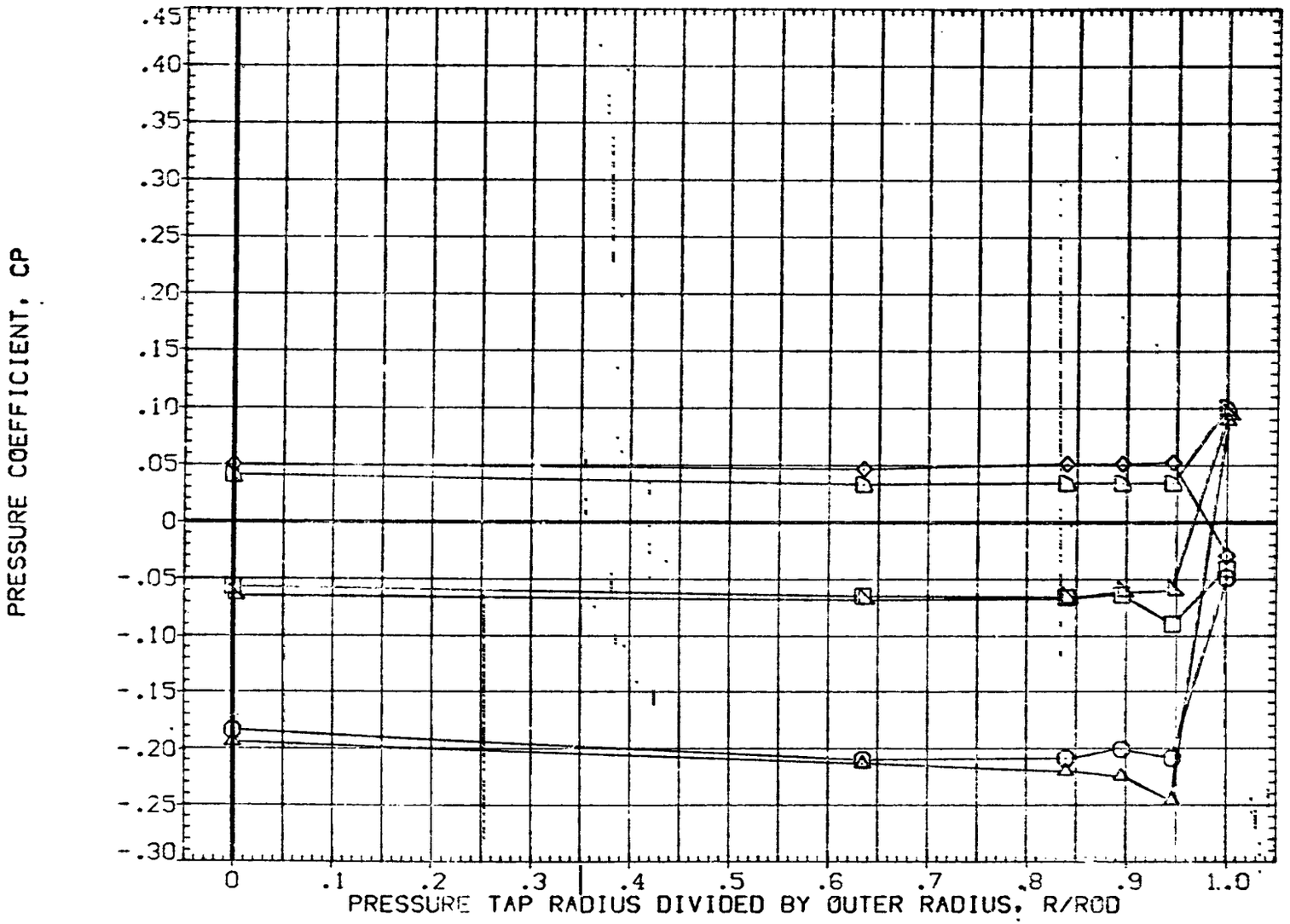


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(REG435)	□	ARC97-0A41A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(REG437)	◇	ARC97-0A41A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(REG439)	△	ARC97-0A41A82 OTS(SRB=NOM** MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(REG434)	▽	ARC97-0A41A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(REG436)	◁	ARC97-0A41A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(REG438)	▷	ARC97-0A41A82 OTS+RING(SRB=NOM** MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

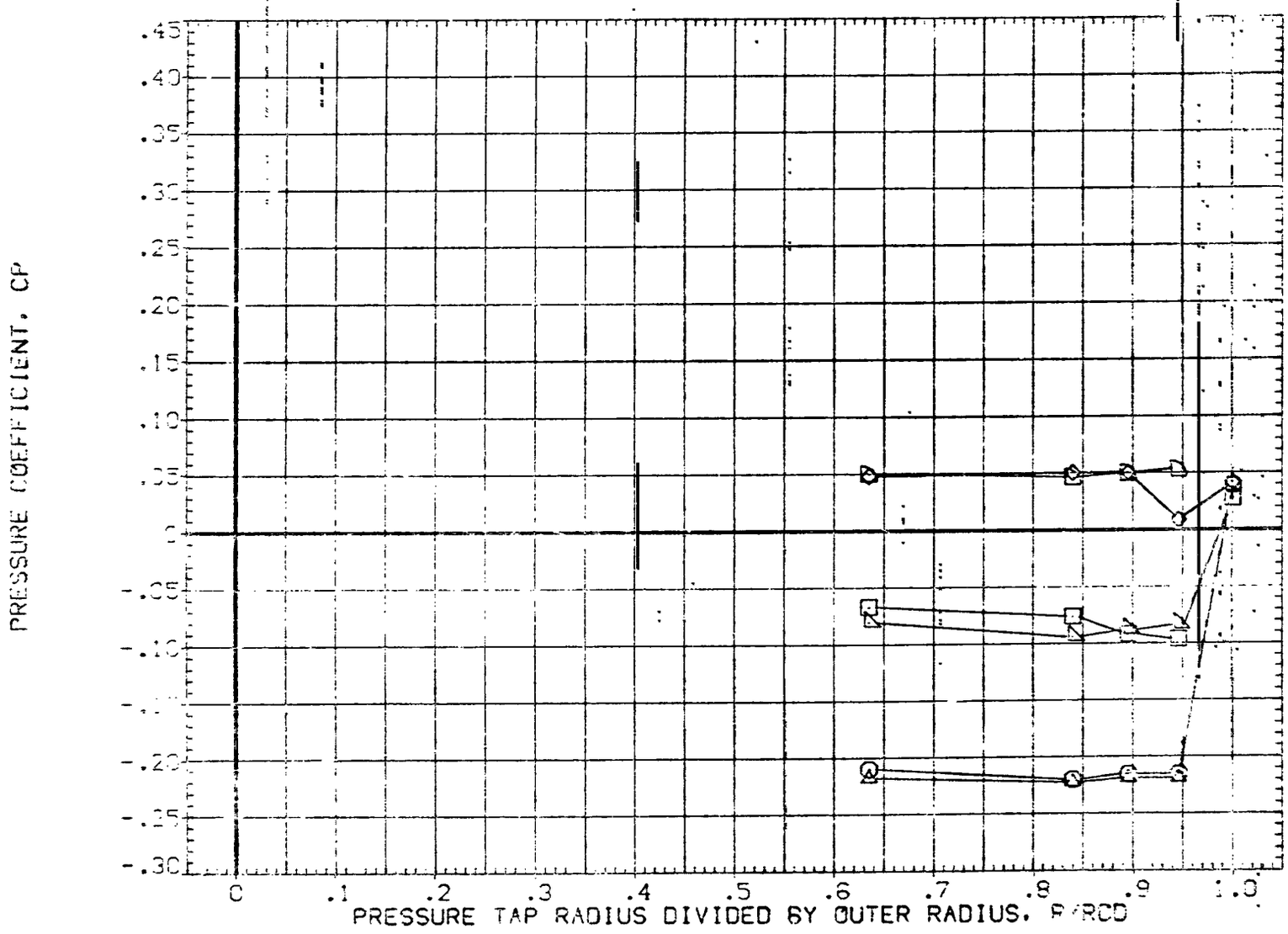


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = 90.000 PAGE 712

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(BE6H35)	□	ARC97-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(BE6H37)		ARC97-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(BE6H39)		ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(BE6H34)		ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(BE6H36)		ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(BE6H38)		ARC97-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000

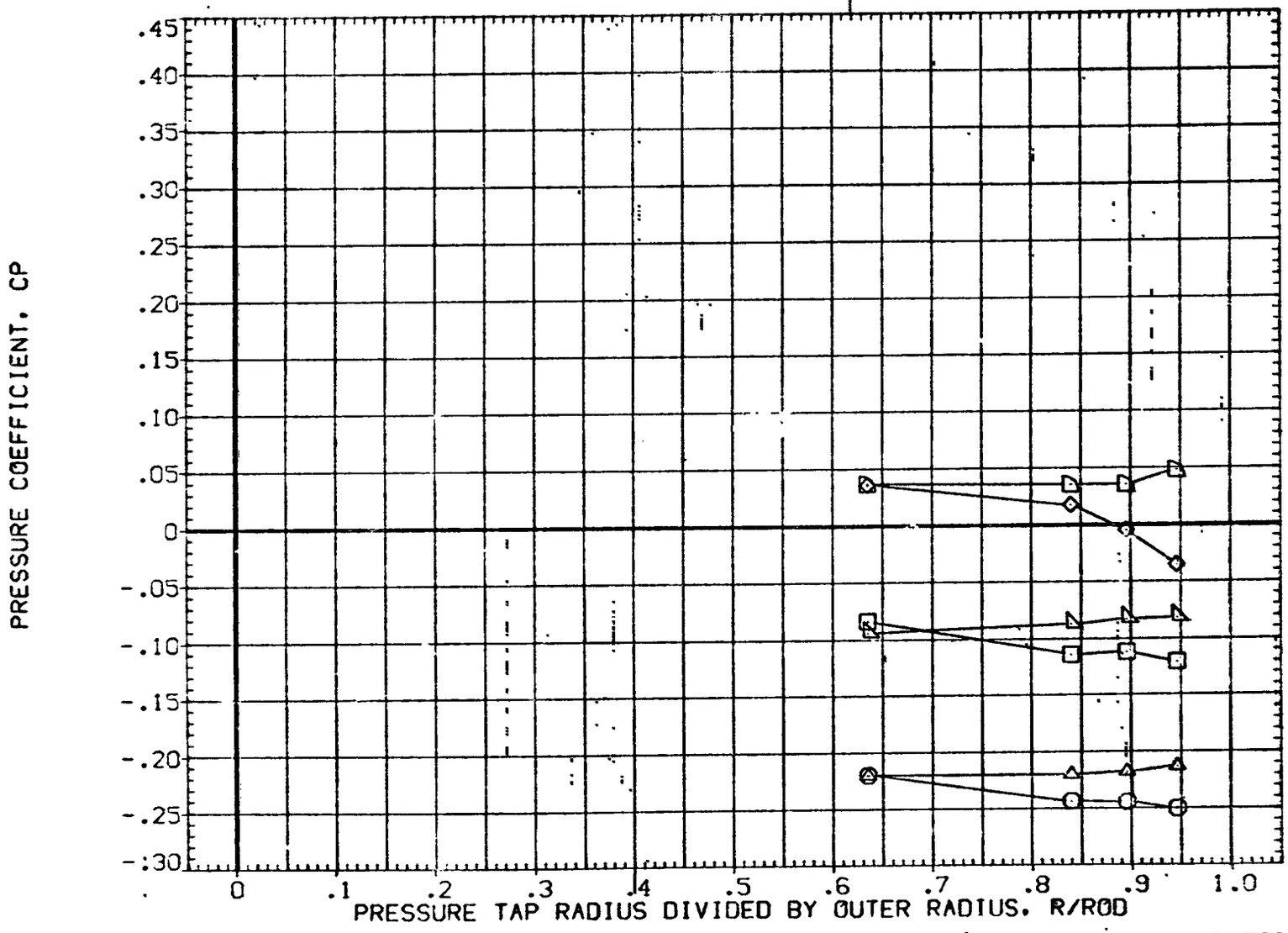
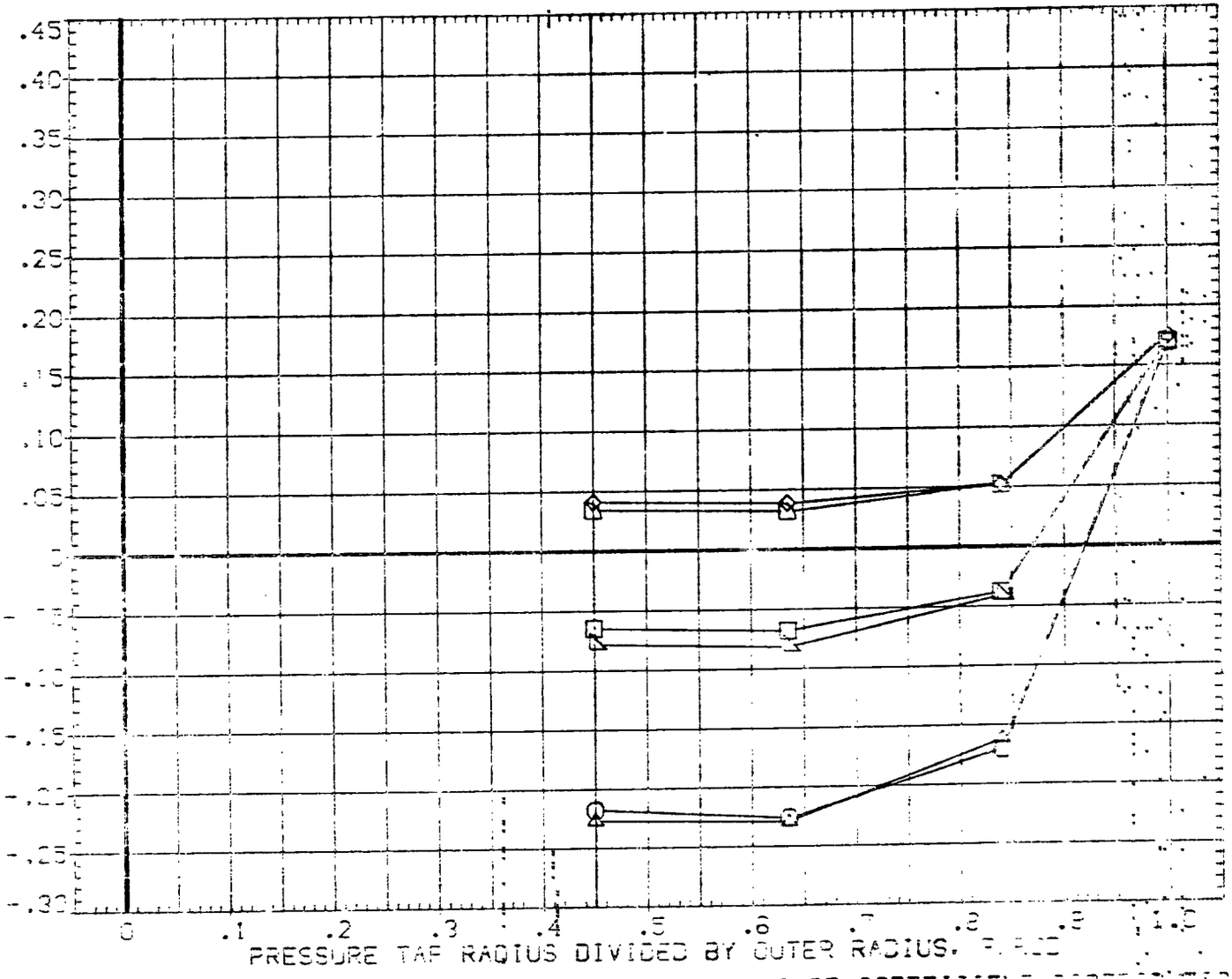


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(8E6H35)		ARC97-C441A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(8E6H37)		ARC97-C441A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(8E6H39)		ARC97-C441A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(8E6H34)		ARC97-C441A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.000
(8E6H35)		ARC97-C441A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000
(8E6H36)		ARC97-C441A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.000



PRESSURE COEFFICIENT, CP

PRESSURE TAP RADIUS DIVIDED BY OUTER RADIUS, R/RLO

FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6442)		ARC97-044IA92 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(AE6444)		ARC97-044IA92 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AE6446)		ARC97-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AE6497)		ARC97-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(AE6498)		ARC97-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AE6499)		ARC97-044IA92 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200

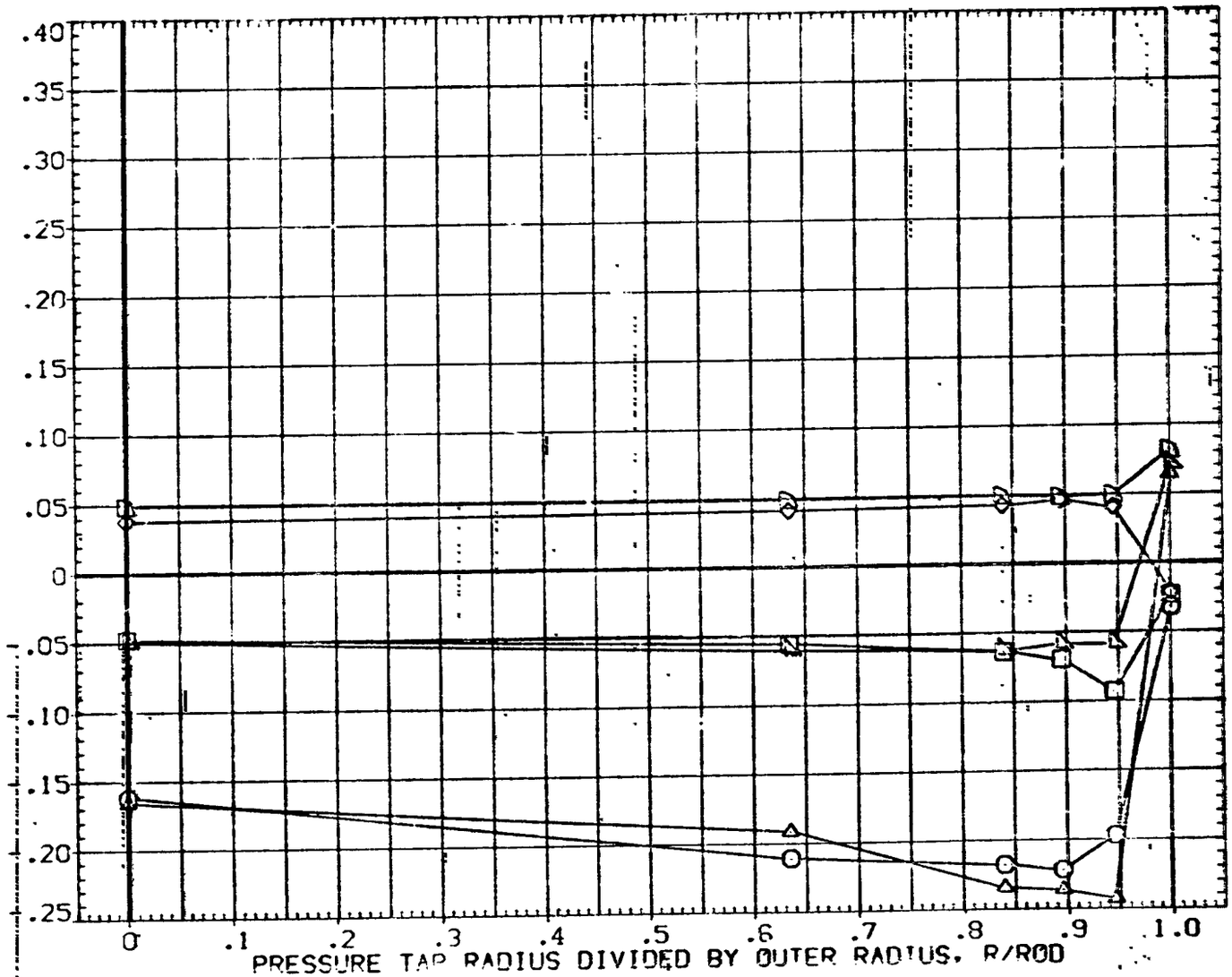


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 PHI = .000

DATA SET S/REC	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

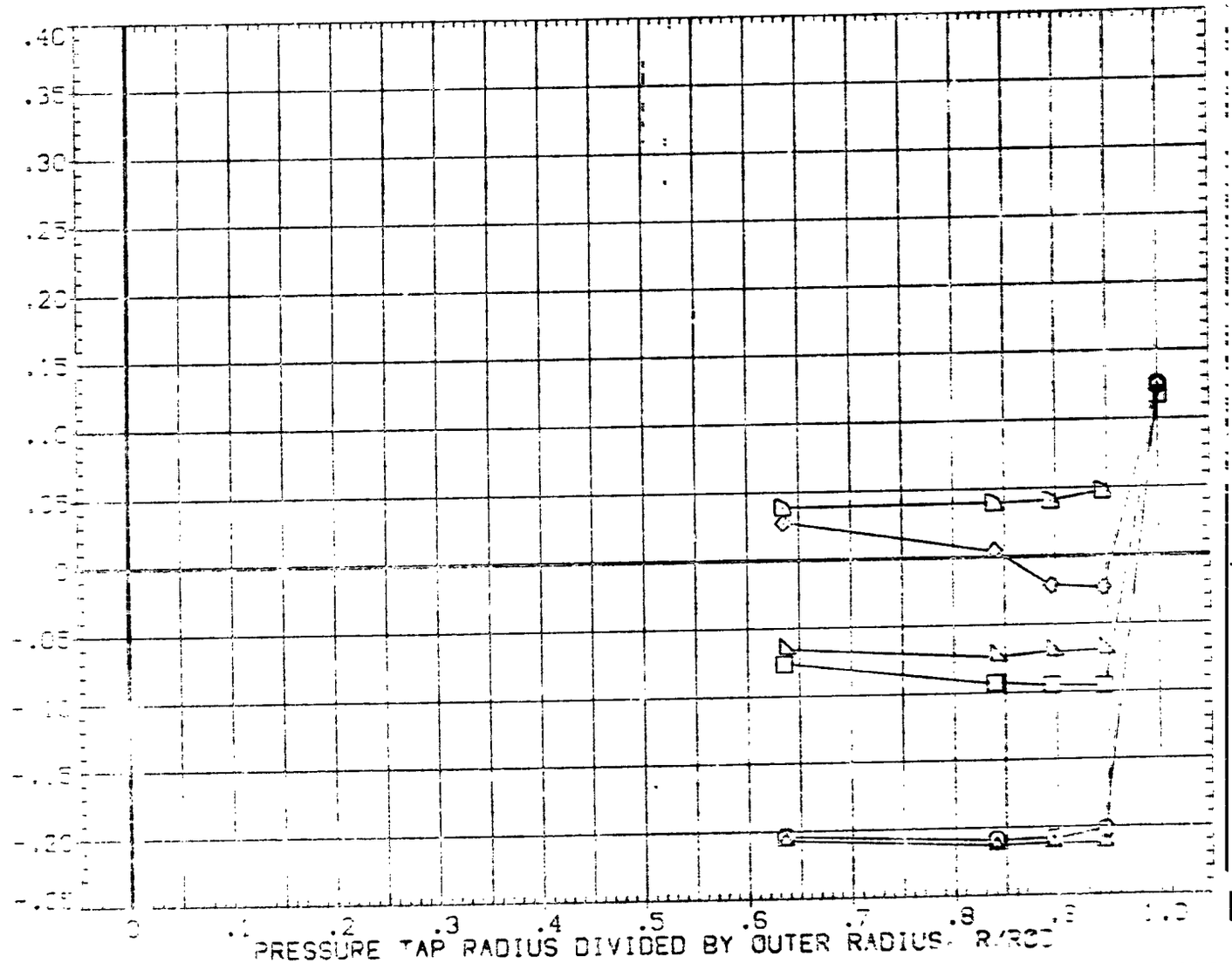


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 MACH = 2.200

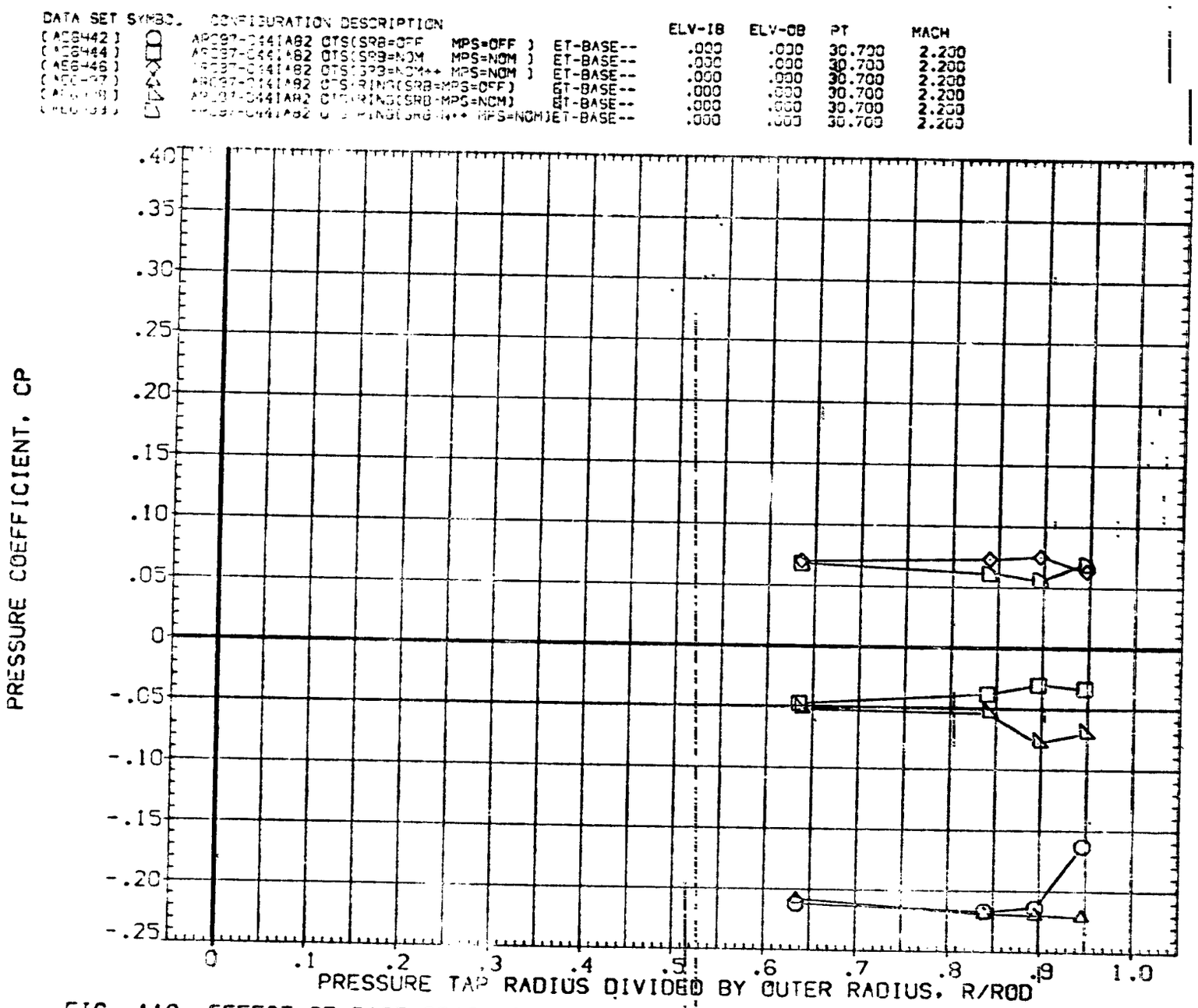


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PC	MACH
(AB8-42)		AP097-044!A82 OTS(SRB=OFF	MPS=OFF) ET-BASE--	.000	.000	30.700	2.200
(AB8-43)		AP097-044!A82 OTS(SRB=NOM	MPS=NOM) ET-BASE--	.000	.000	30.700	2.200
(AB8-44)		AP097-044!A82 OTS(SRB=NOM++	MPS=NOM) ET-BASE--	.000	.000	30.700	2.200
(AB8-87)		AP097-044!A82 OTS+RING(SRB=MPS=OFF)	ET-BASE-+	.000	.000	30.700	2.200
(AB8-88)		AP097-044!A82 OTS+RING(SRB=MPS=NOM)	ET-BASE-+	.000	.000	30.700	2.200
(AB8-89)		AP097-044!A82 OTS+RING(SRB=MPS=NOM++	MPS=NOM) ET-BASE-+	.000	.000	30.700	2.200

PLAND

PRESSURE COEFFICIENT, CP

.40 .35 .30 .25 .20 .15 .10 .05 0 -.05 -.10 -.15 -.20 -.25

0 .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0

PRESSURE TAP RADIUS DIVIDED BY OUTER RADIUS, R R30

FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = -1.000 BETA = .000 PHI = 270.000

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AEBH42)	[illegible]97-C44IA82 CTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(AEBH44)	[illegible]97-C44IA82 CTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AEBH46)	[illegible]97-C[illegible]A82 CTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AEBH37)	[illegible]97-C[illegible]A82 CTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(AEBH39)	[illegible]97-C[illegible]A82 CTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AEBH99)	ARC97-C[illegible]A82 CTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200

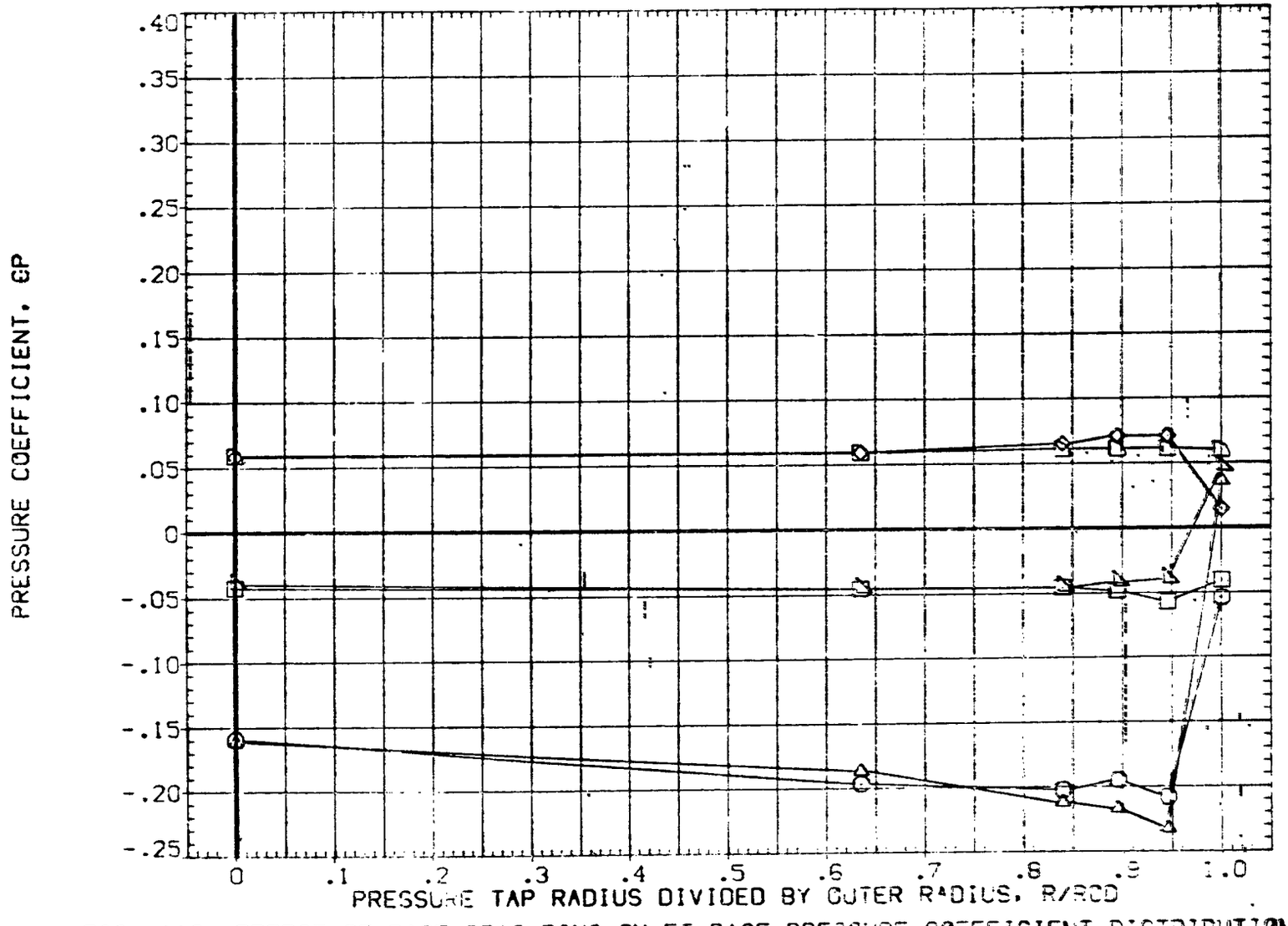


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = .000

DATA SET NAME	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
[illegible]	A82097-044(A82 OTS(SRB=OFF	MPS=OFF) ET-BASE--	.000	.000	30.700	2.461
[illegible]	A82097-044(A82 OTS(SRB=NOM	MPS=NOM) ET-BASE--	.000	.000	30.700	2.461
[illegible]	A82097-044(A82 OTS(SRB=NOM++	MPS=NOM) ET-BASE--	.000	.000	30.700	2.461
[illegible]	A82097-044(A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.461
[illegible]	A82097-044(A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.461
[illegible]	A82097-044(A82 OTS+RING(SRB=NOM++	MPS=NOM) ET-BASE--	.000	.000	30.700	2.461

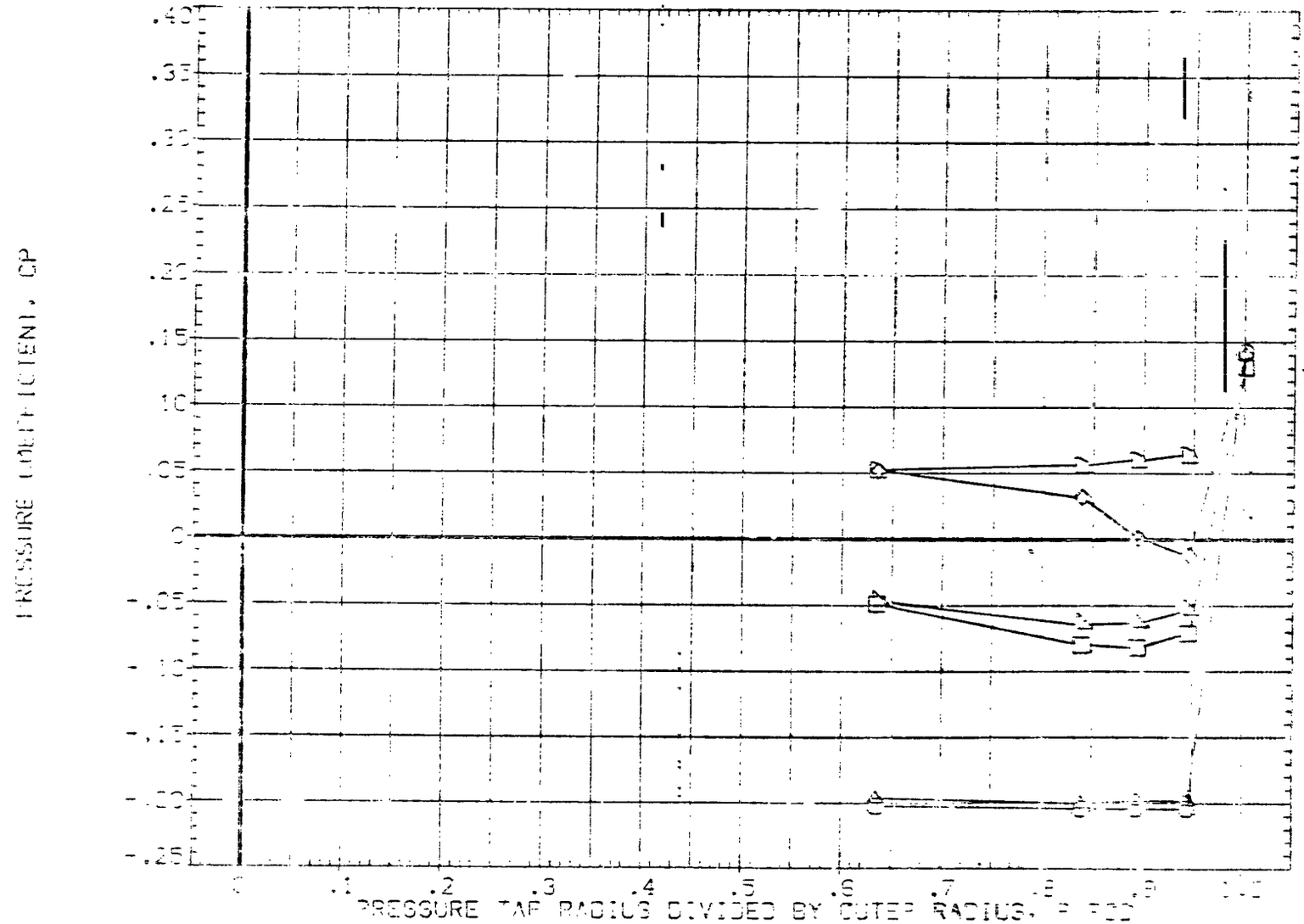
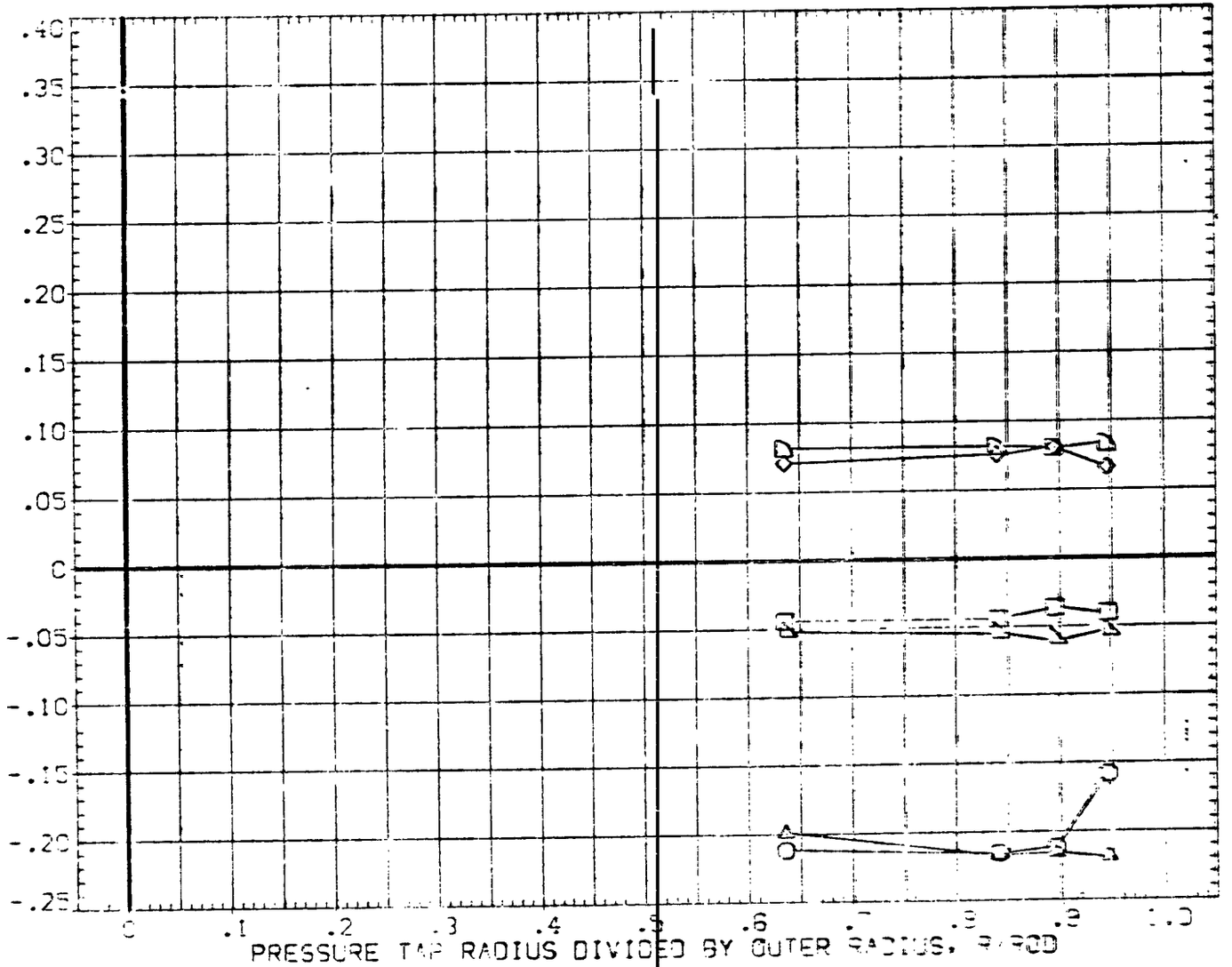


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = 90.000 BASE TOP

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6H42)		AP037-044(A92 OTS(SRB=OFF	MPS=OFF) ET-BASE--	.000	.000	30.700	2.200
(AE6H44)		AP037-044(A92 OTS(SRB=NOM	MPS=NOM) ET-BASE--	.000	.000	30.700	2.200
(AE6H46)		AP037-044(A92 OTS(SRB=NOM++	MPS=NOM) ET-BASE--	.000	.000	30.700	2.200
(AE6H37)		AP037-044(A92 OTS(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(AE6H33)		AP037-044(A92 OTS(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AE6H31)		AP037-044(A92 OTS(SRB=NOM++	MPS=NOM) ET-BASE--	.000	.000	30.700	2.200

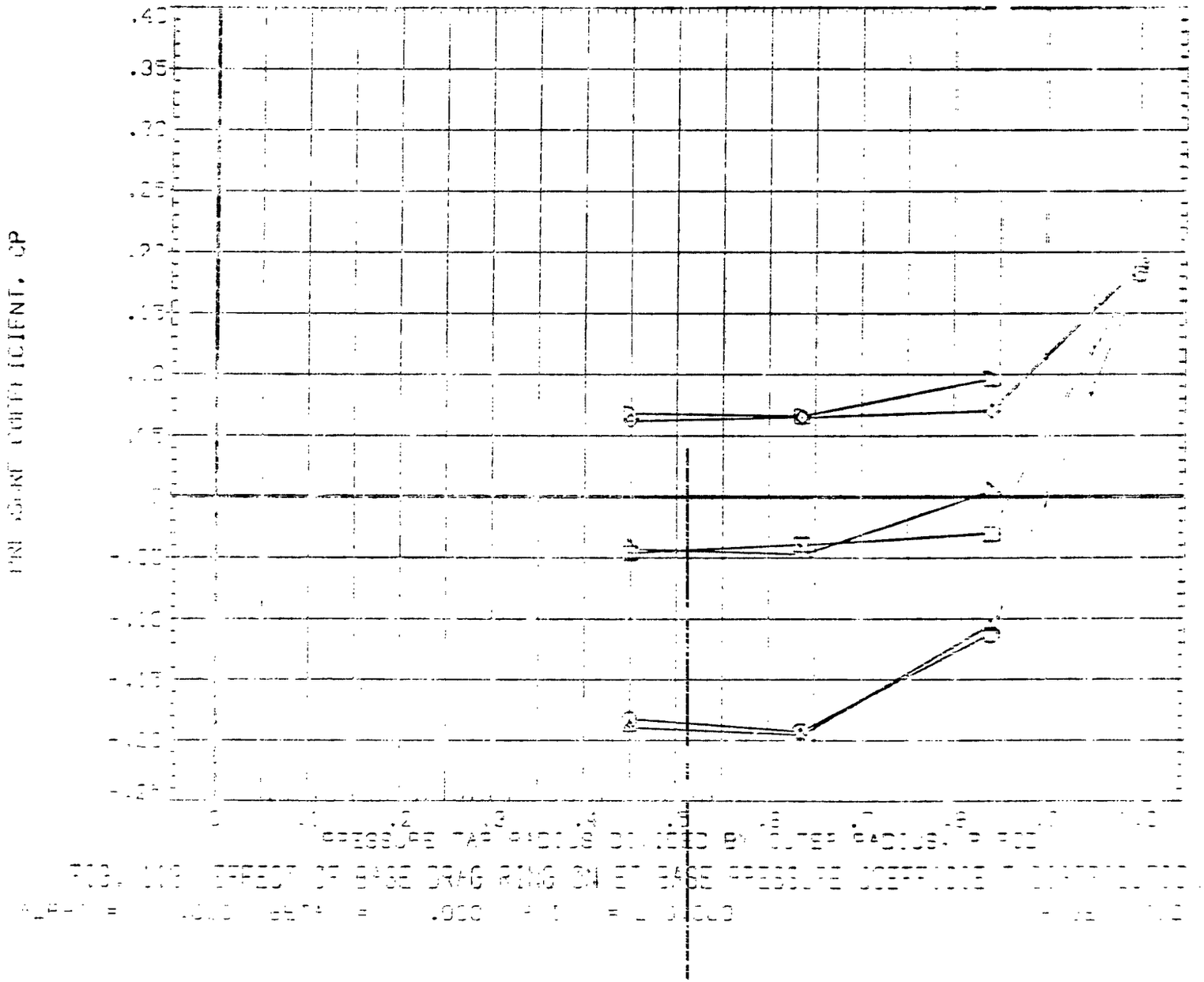


PRESSURE COEFFICIENT, CP

PRESSURE TAP RADIUS DIVIDED BY OUTER RADIUS, R/ROD

FIG. 113 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = .000 PHI = 180.000 BASE


.40
.36
.32
.28
.24
.20
.16
.12
.08
.04
0
.1
.2
.3
.4
.5
.6
.7
.8
.9
1.0

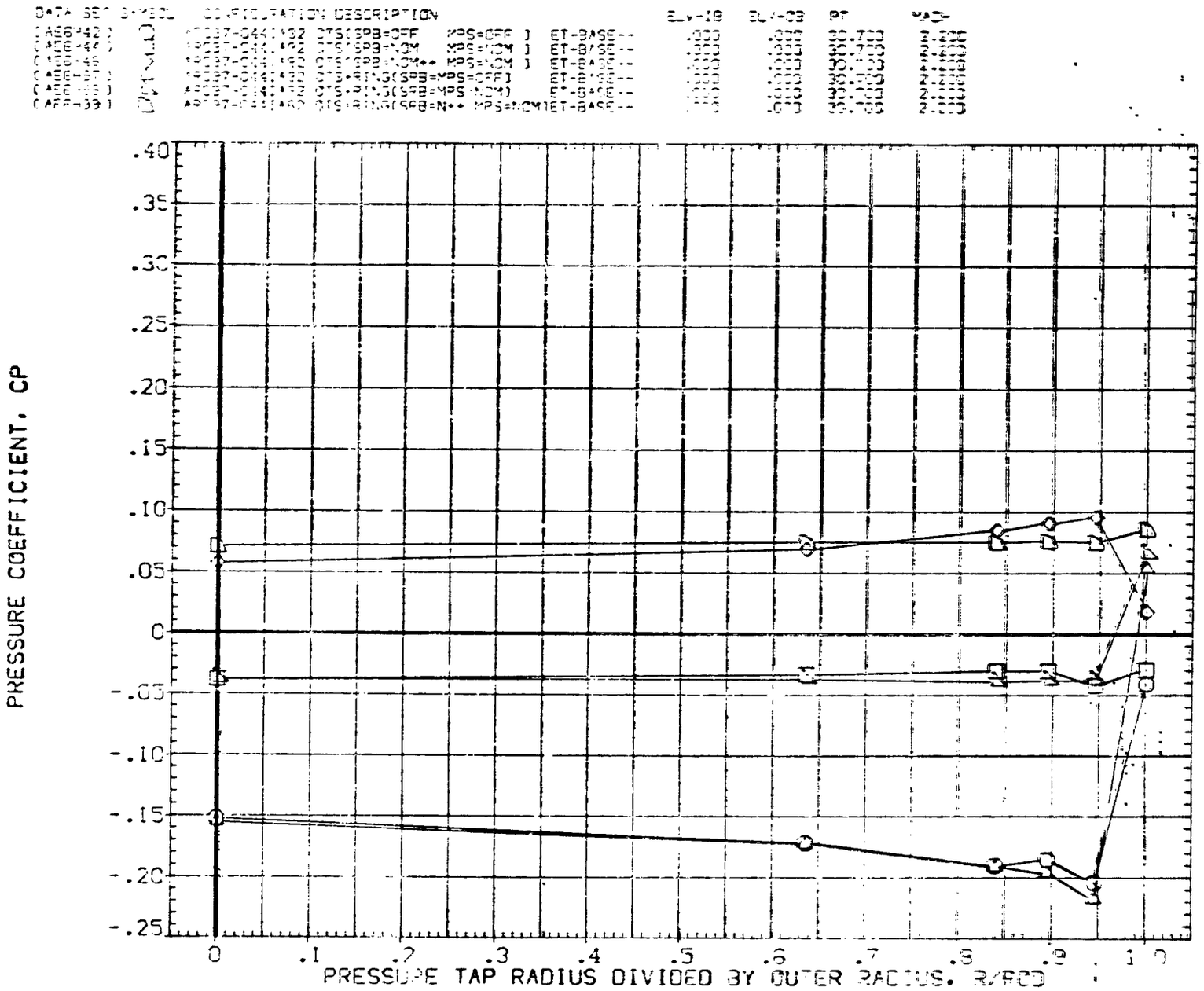


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	RT	MCD-
(AE6M48)	(1,6,0)	AR097-0441A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.000	1.200
(AE6M49)		AR097-0441A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.000	1.200
(AE6M50)		AR097-0441A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.000	1.200
(AE6M51)		AR097-0441A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.000	1.200
(AE6M52)		AR097-0441A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.000	1.200
(AE6M53)		AR097-0441A82 OTS+RING(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.000	1.200

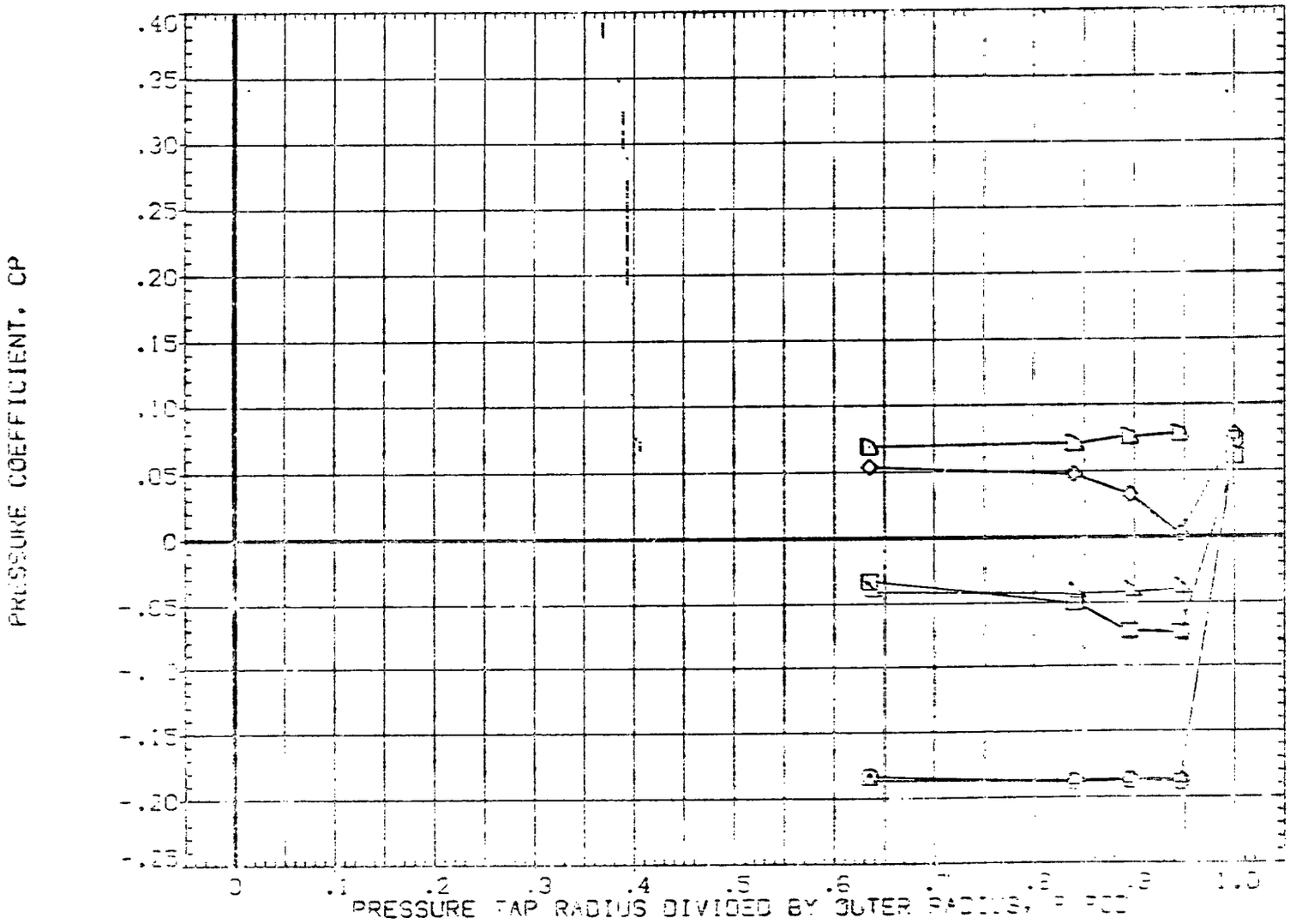


FIG. 116 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 90.000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(AE6-42)	ARC87-044(A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(AE6-44)	ARC87-044(A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AE6-46)	ARC87-044(A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AE6-97)	ARC87-044(A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(AE6-98)	ARC87-044(A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(AE6-99)	ARC87-044(A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200

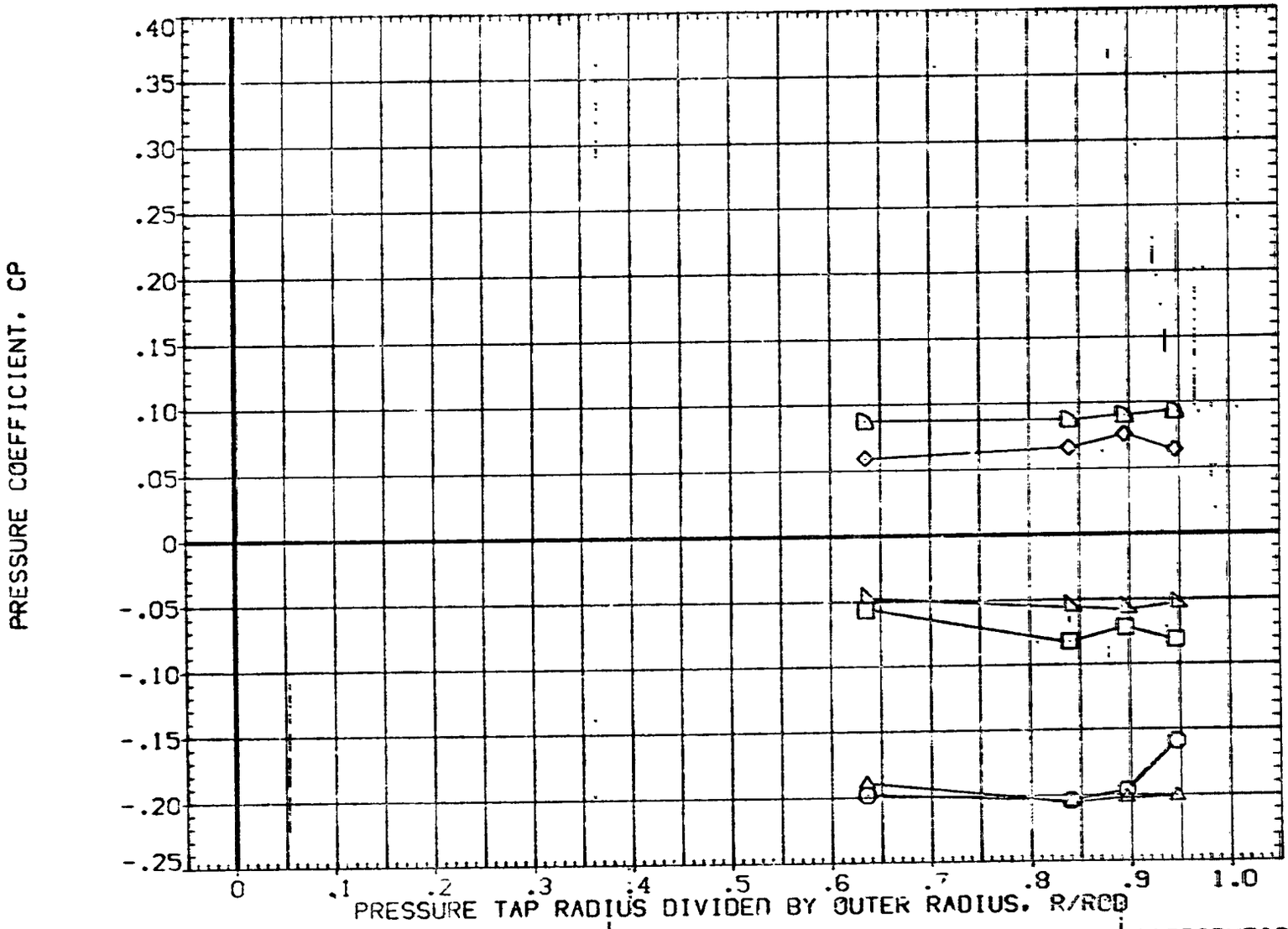


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 180.000

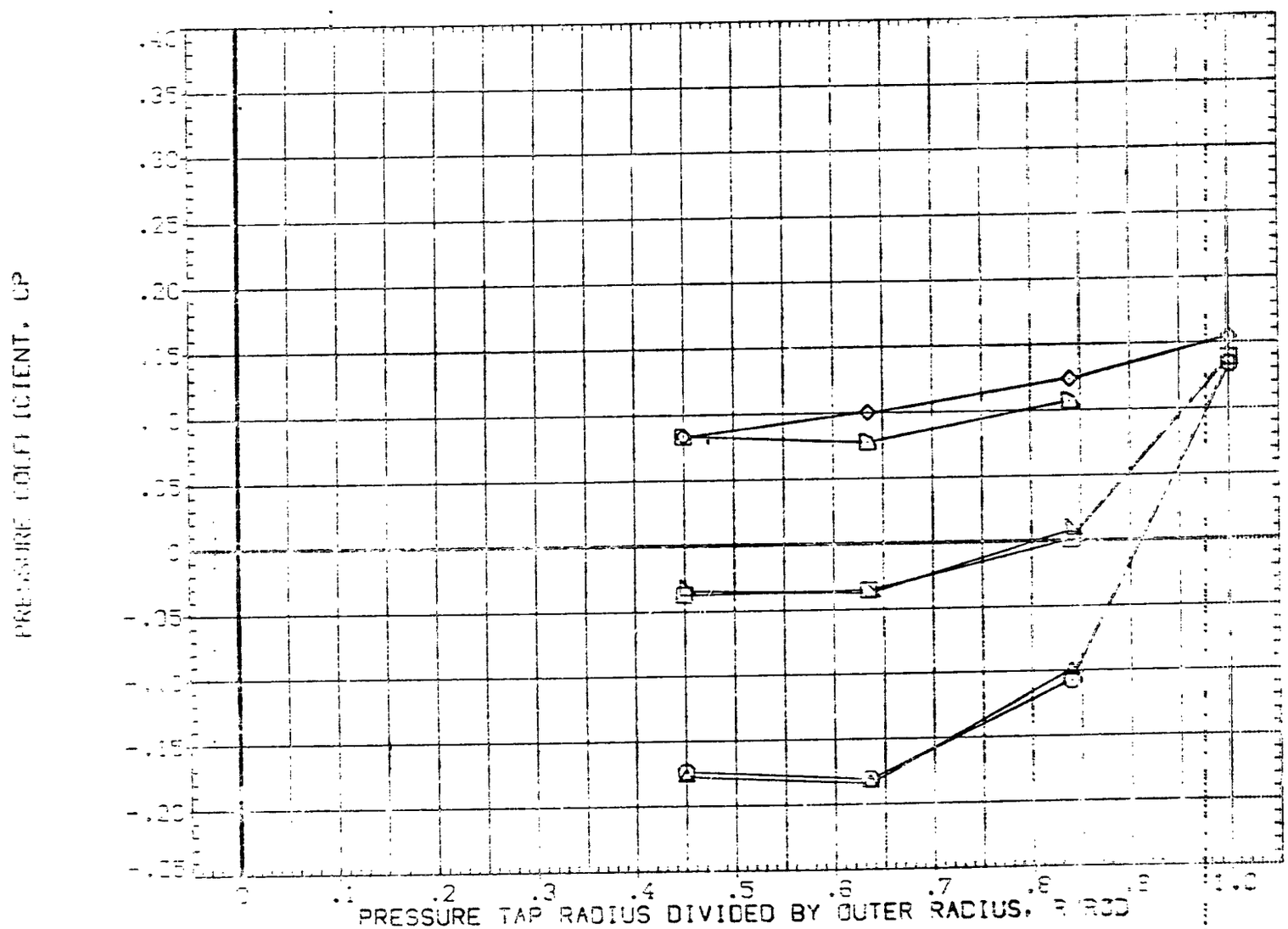


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = 4.000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(BE6H42)	○	AP097-0441A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(BE6H44)	□	AP097-0441A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(BE6H46)	△	AP097-0441A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(9E6H97)	◇	AP097-0441A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.200
(9E6H98)	▷	AP097-0441A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200
(0E6H01)	⊕	AP097-0441A82 OTS+RING(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.200

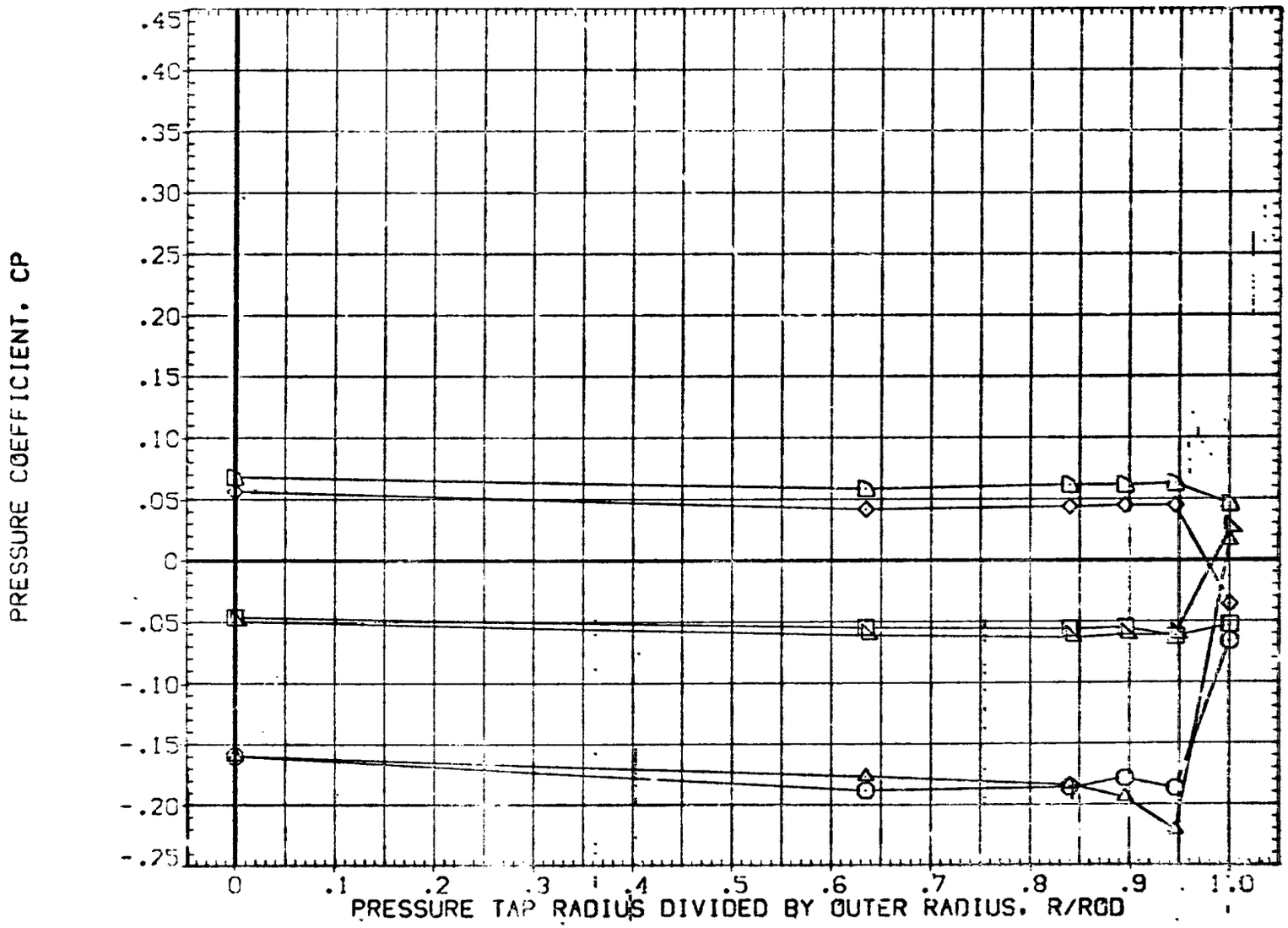


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = .000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
[illegible]	ARC87-044IA82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	[illegible]
[illegible]	ARC87-044IA82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	[illegible]
[illegible]	ARC87-044IA82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	[illegible]
[illegible]	ARC87-044IA82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	[illegible]
[illegible]	ARC87-044IA82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	[illegible]
[illegible]	ARC87-044IA82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	[illegible]

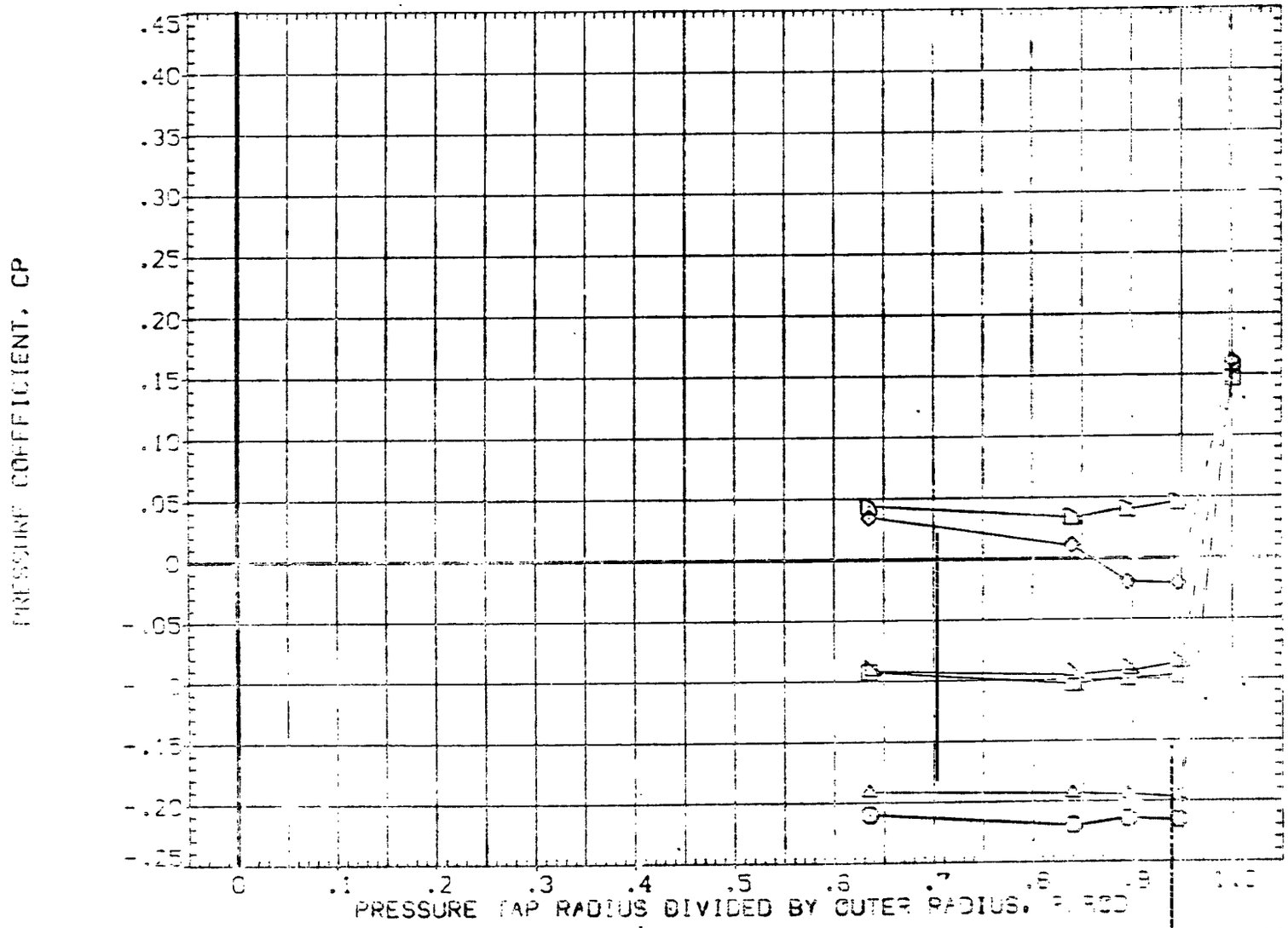


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = 90.000

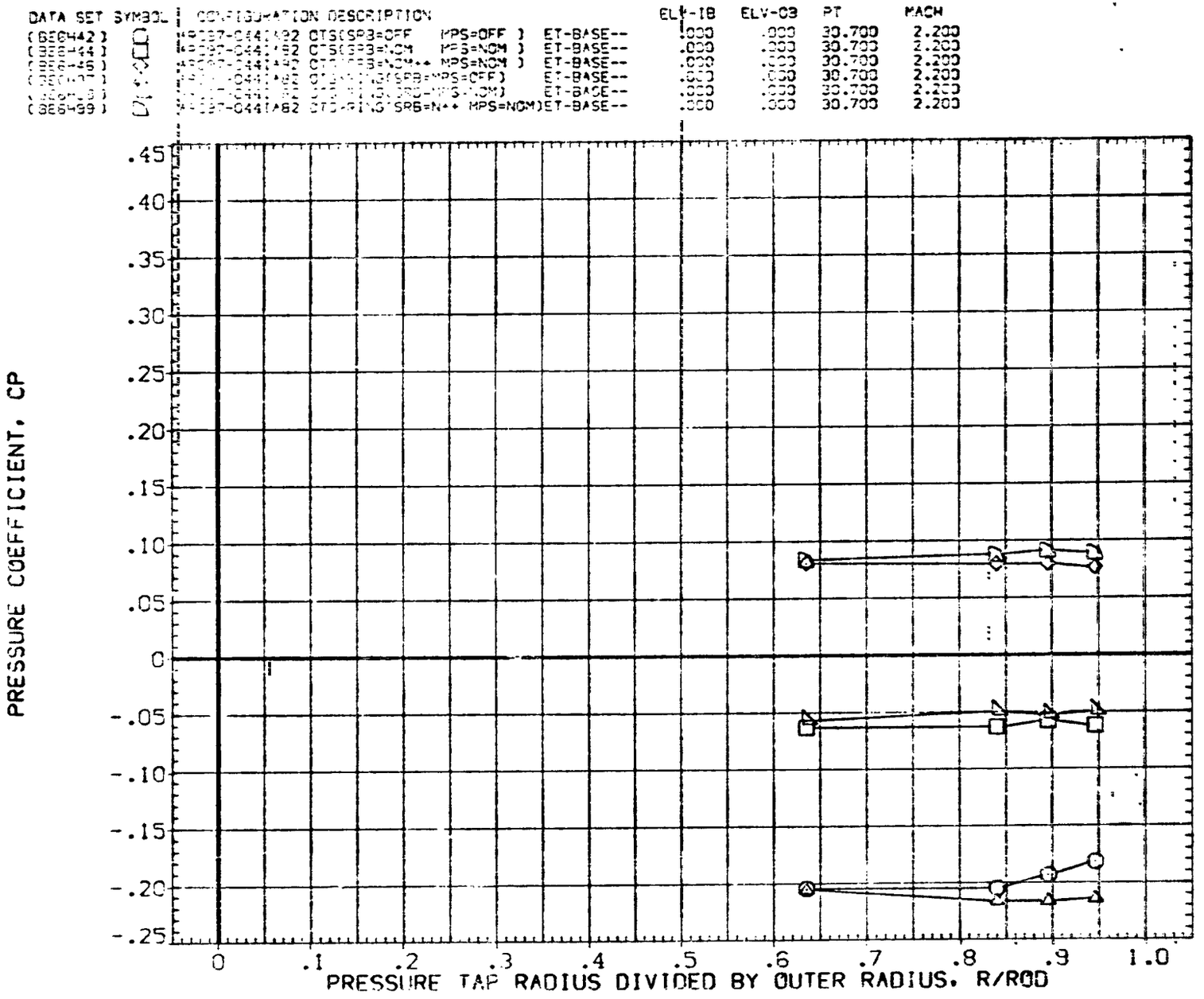


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = 180.000

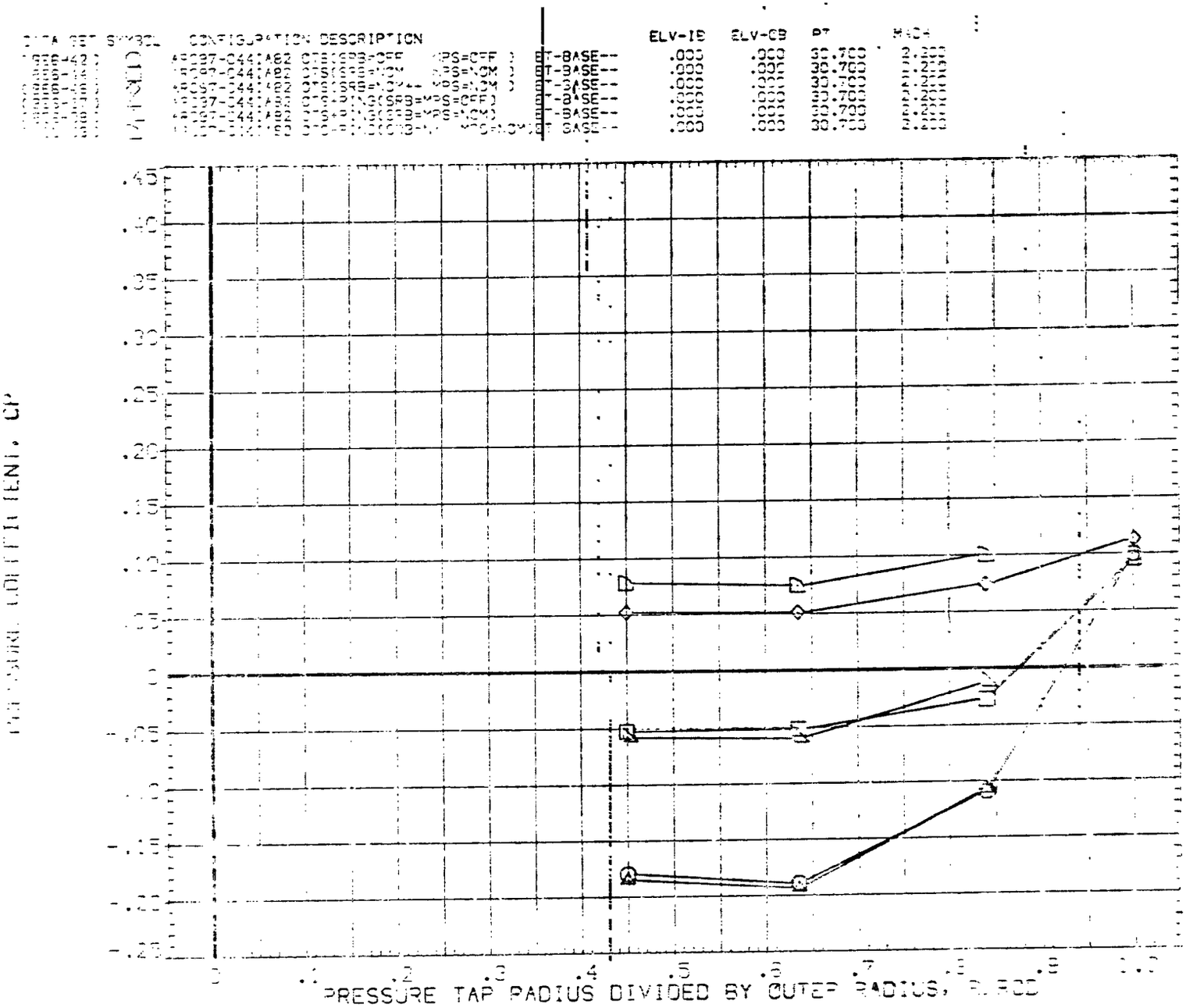


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = -4.000 PHI = 270.000 BASE 730

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	PT	MACH
(BE6H42)		AR097-044[A82 OTS(SRB=OFF MPS=OFF)	ET-BASE--	.000	.000	30.700	2.400
(BE6H44)		AR097-044[A82 OTS(SRB=NOM MPS=NOM)	ET-BASE--	.000	.000	30.700	2.400
(BE6H46)		AR097-044[A82 OTS(SRB=NOM++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.400
(BE6H47)		AR097-044[A82 OTS+RING(SRB=MPS=OFF)	ET-BASE--	.000	.000	30.700	2.400
(BE6H48)		AR097-044[A82 OTS+RING(SRB=MPS=NOM)	ET-BASE--	.000	.000	30.700	2.400
(BE6-93)		AR097-044[A82 OTS+RING(SRB=N++ MPS=NOM)	ET-BASE--	.000	.000	30.700	2.400

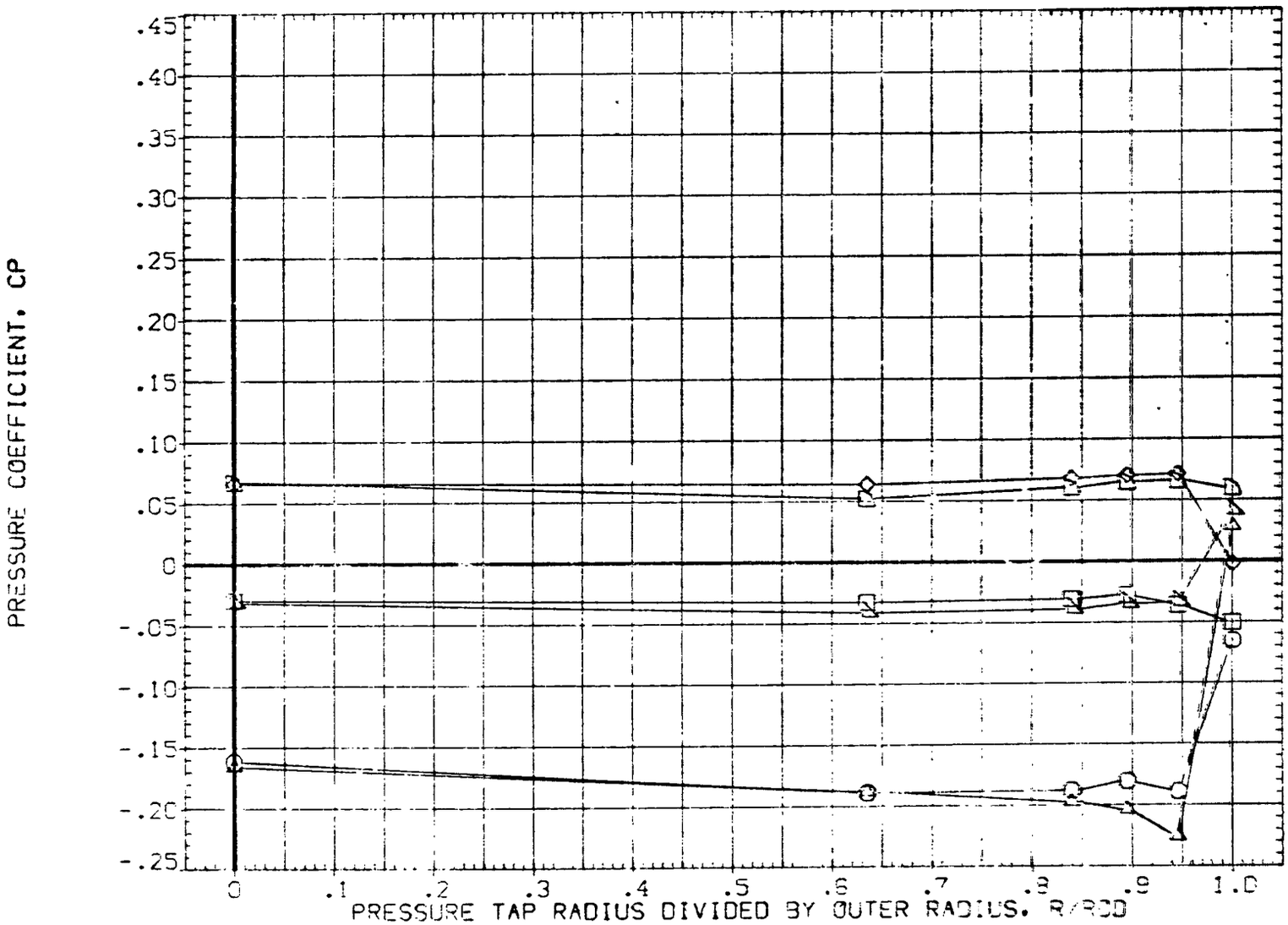


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

ALPHA = .000 BETA = 4.000 PHI = .000

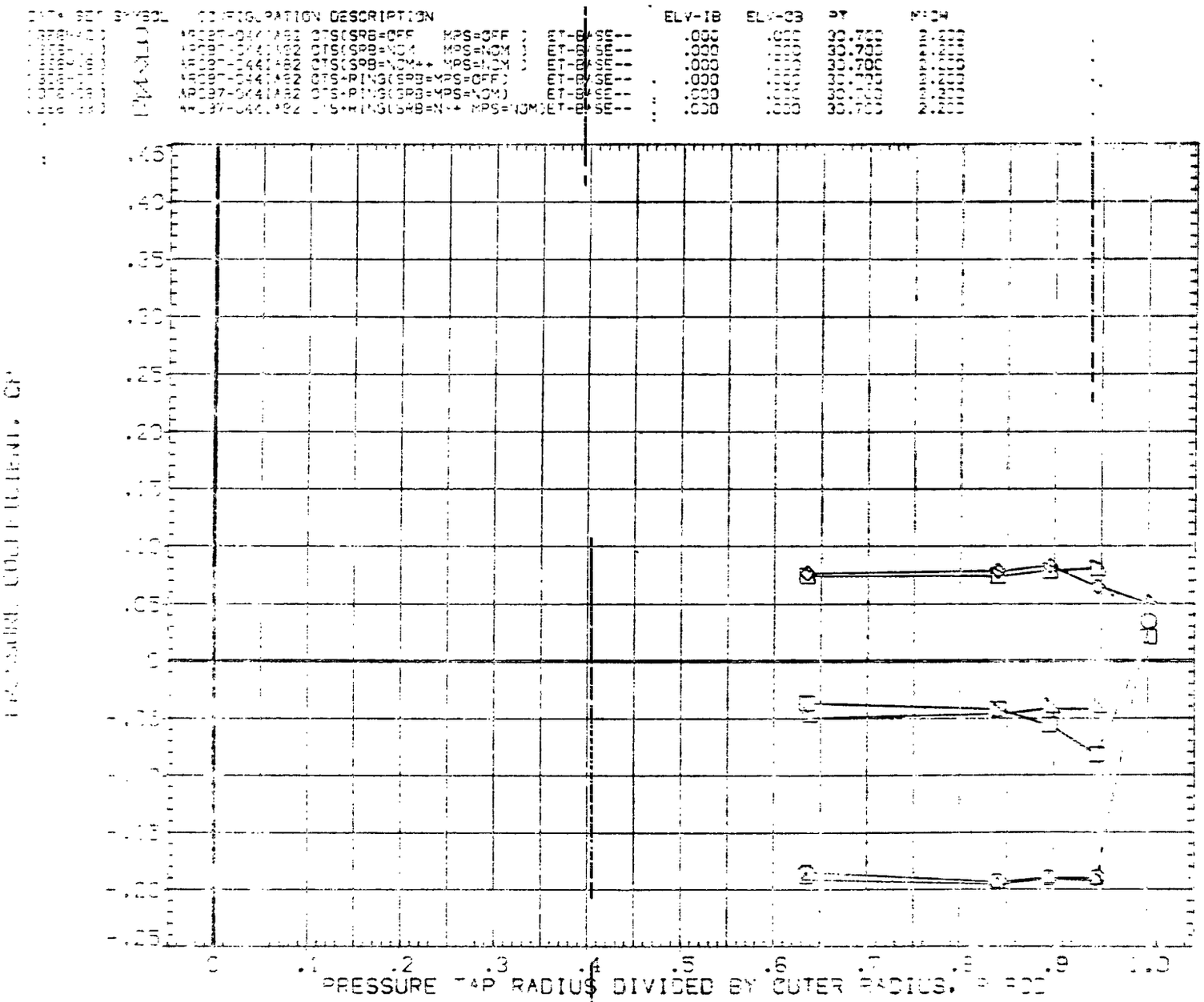


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

PHI = .000 BETA = 4.000 PHI = 90.000

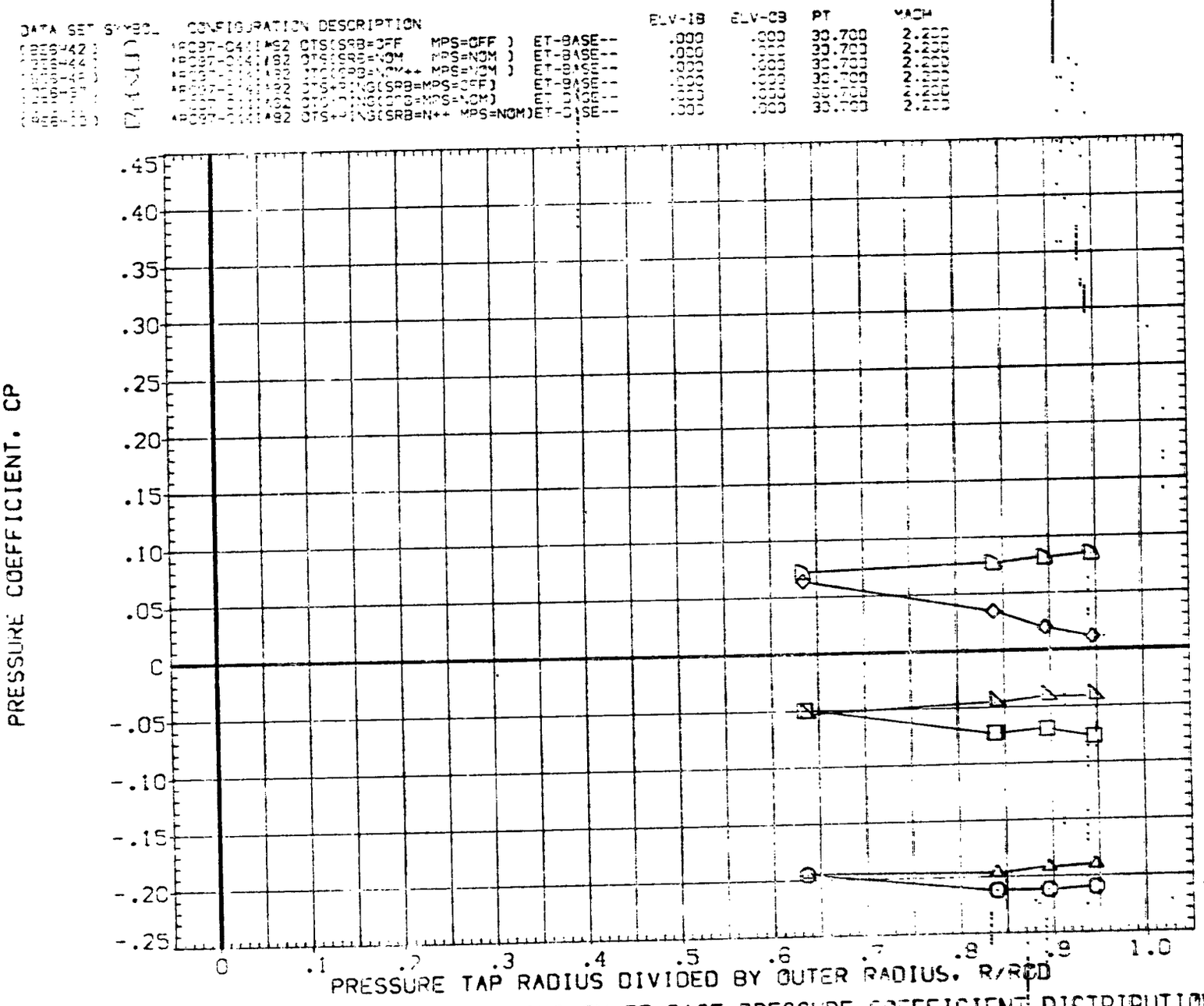


FIG. 119 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE COEFFICIENT DISTRIBUTION

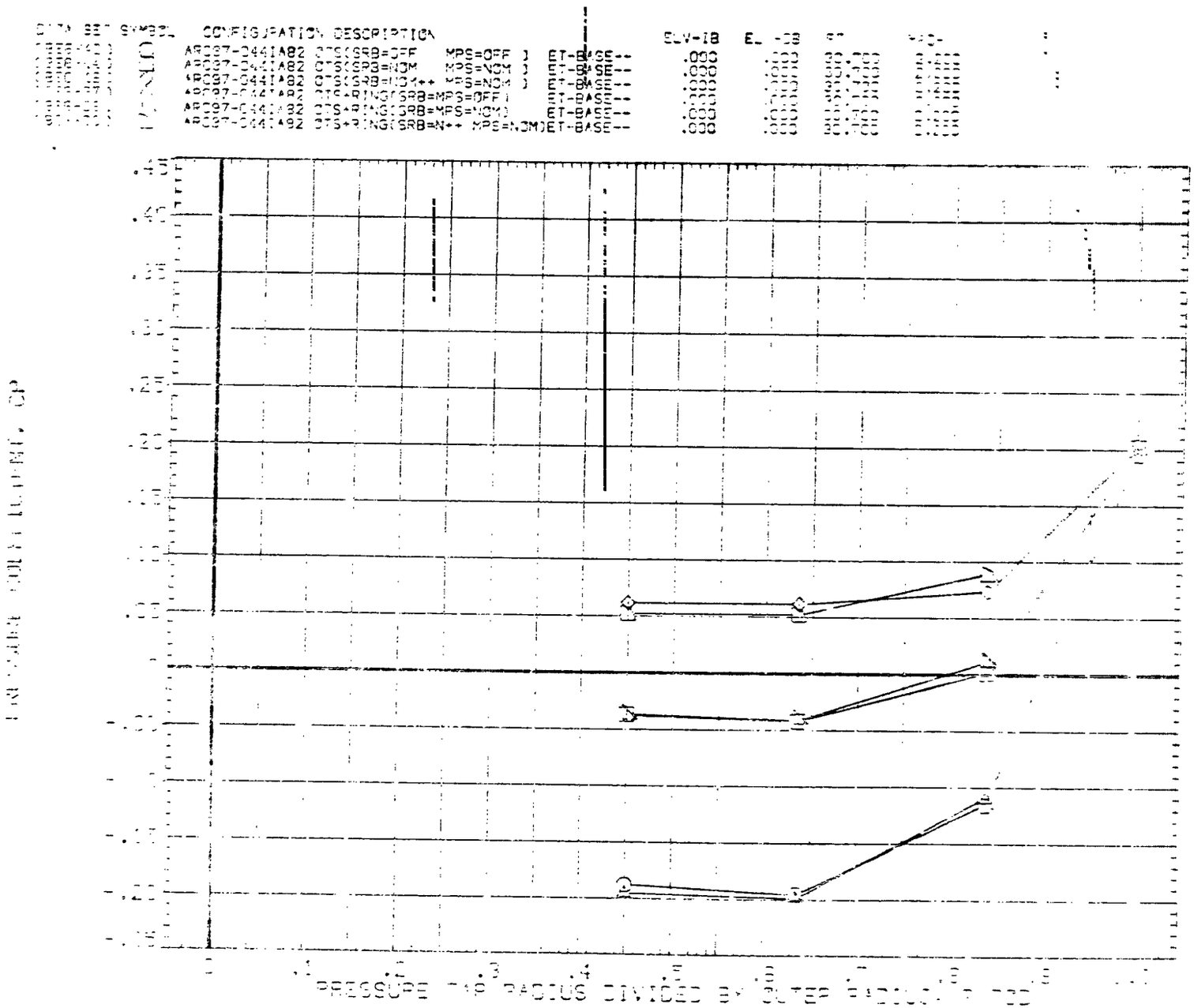


FIG. 118 EFFECT OF BASE DRAG RING ON ET BASE PRESSURE DISTRIBUTION

MACH = .800 BETA = 4.000 PHI = 270.000 BASE 134

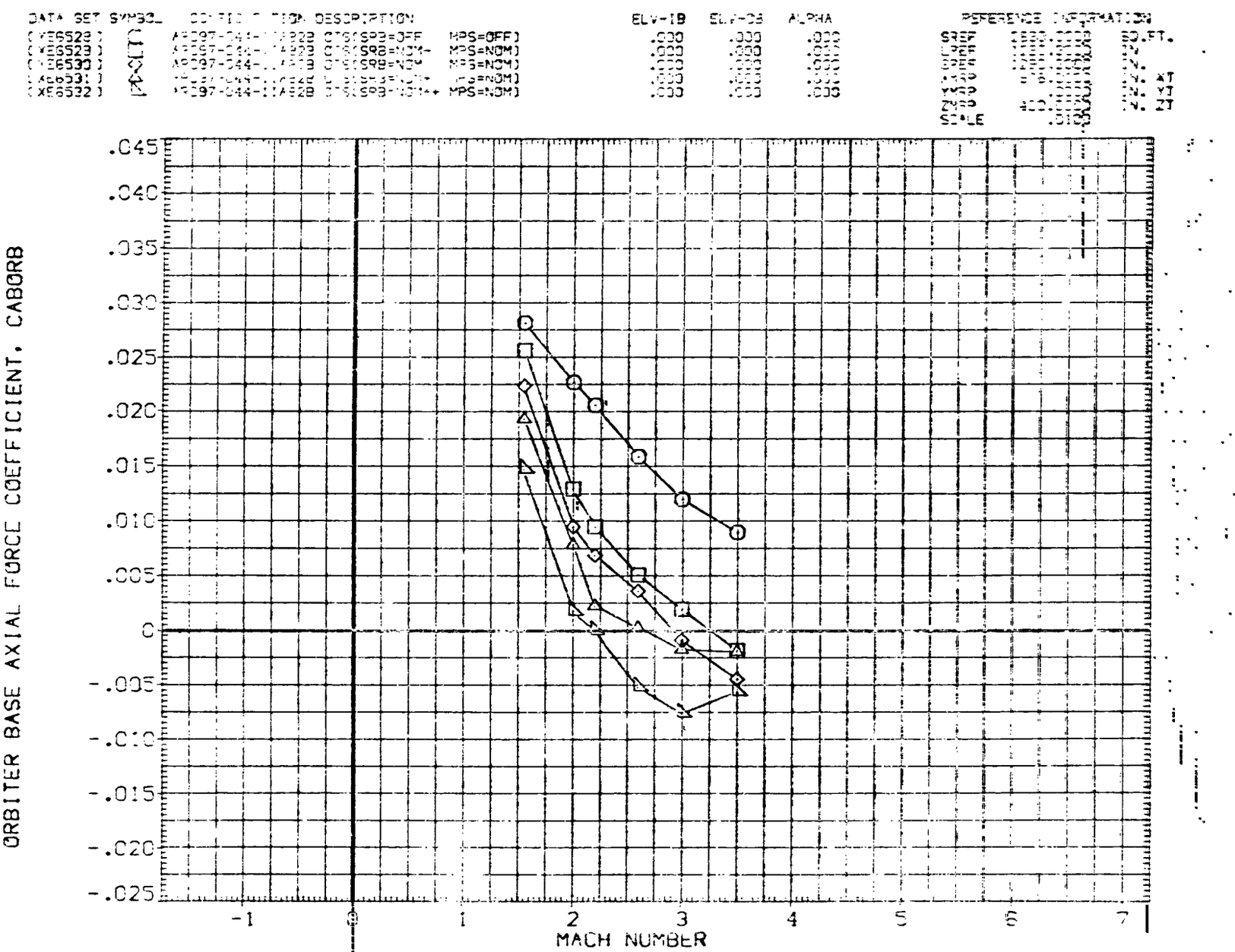


FIG. 120 SUMMARY-MPS/SRB PLUME SIZE EFFECT ON ORBITER BASE AXIAL FORCE COEF.

(A)BETA = .00

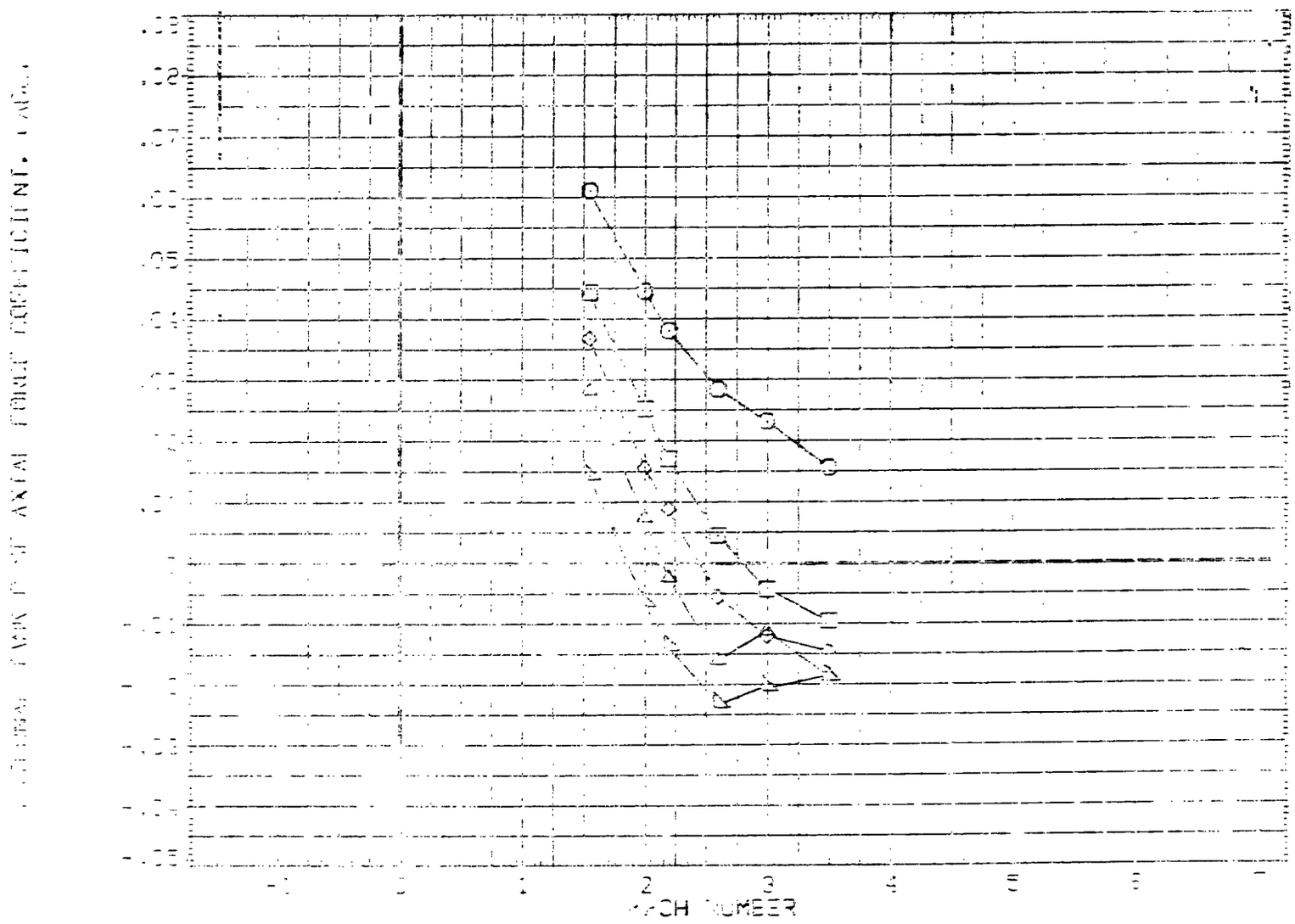


FIG. 121 SUMMARY-MP1/SRB PLUME SIZE EFFECT ON TANK BASE AXIAL FORCE COEF

(1)BETA = .00

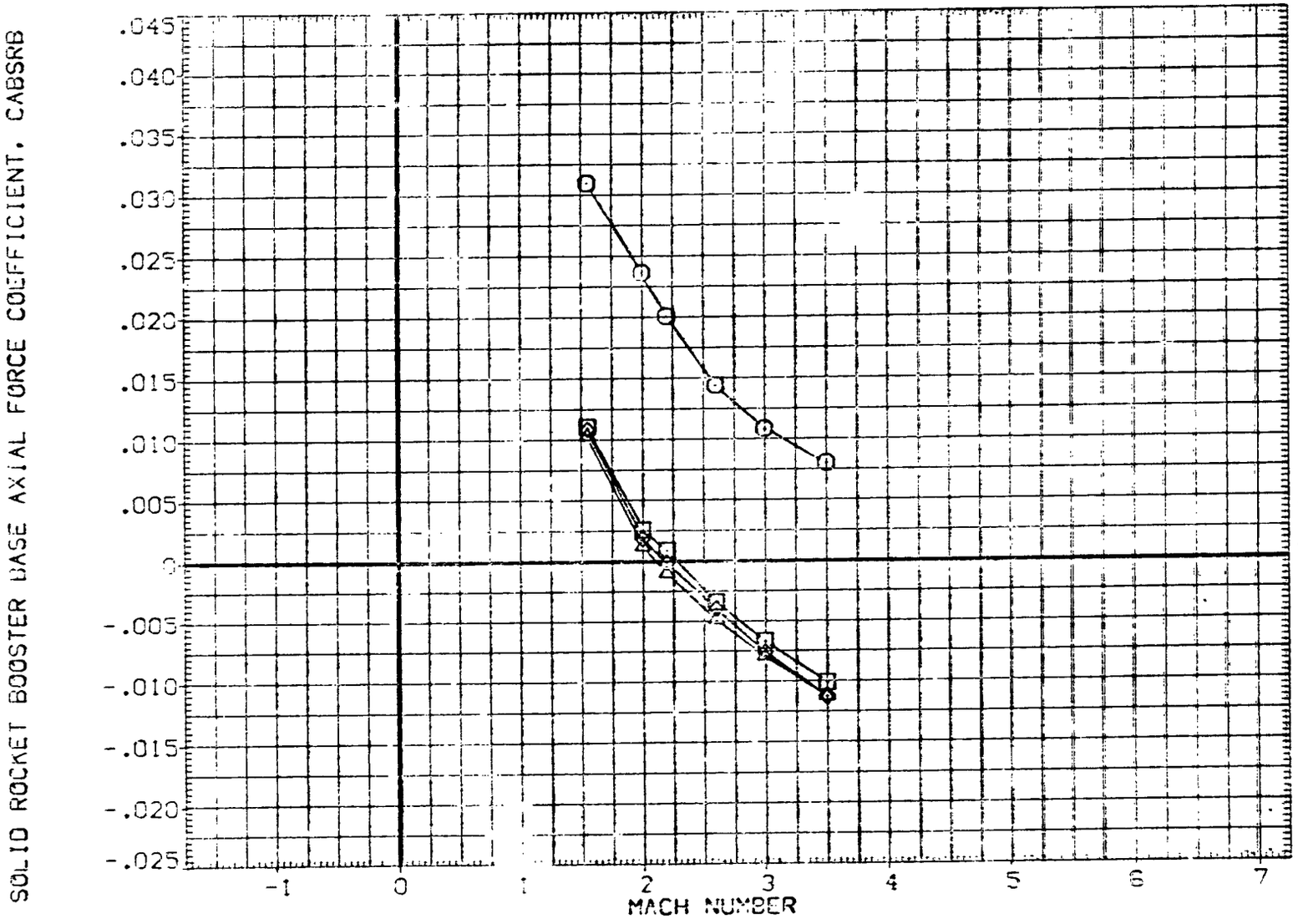
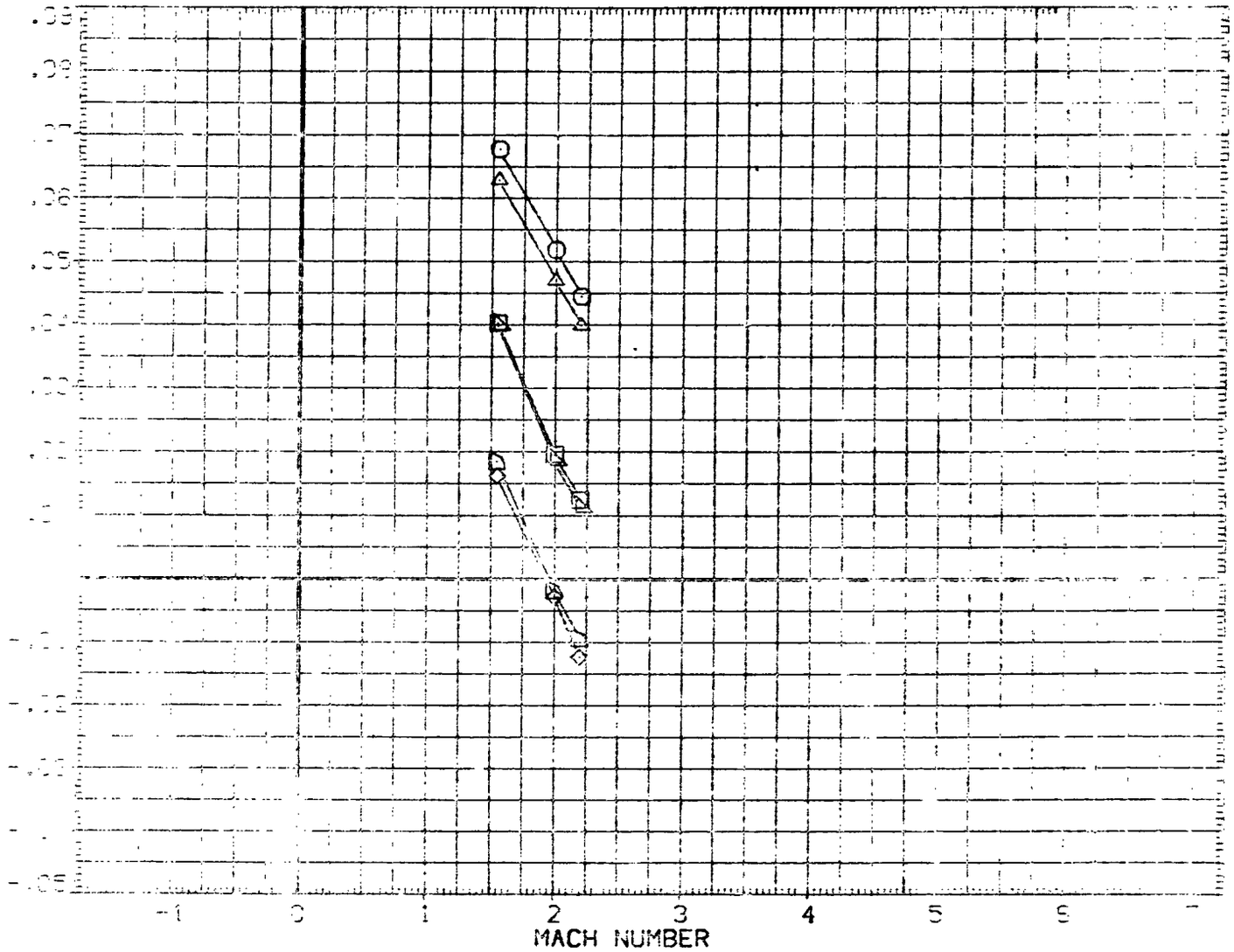


FIG. 122 SUMMARY-MPS/SRB PLUME SIZE EFFECT ON SRB BASE AXIAL FORCE COEF.

(A)BETA = .00

CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	RT	REFERENCE
49087-044-[illegible] DTS(DRAG RING(SRB=OFF MPS=OFF)	.000	.000	-4.000	30.700	SREF
49087-044-[illegible] DTS(DRAG RING(SRB=NOM MPS=NOM)	.000	.000	-4.000	30.700	LREF
49087-044-[illegible] DTS(DRAG RING(SRB=NOM++ MPS=NOM	.000	.000	-4.000	30.700	BREF
49087-044-[illegible] DTS(SRB=OFF MPS=OFF)	.000	.000	-4.000	30.700	XMRP
49087-044-[illegible] DTS(SRB=NOM MPS=NOM)	.000	.000	-4.000	30.700	YMRP
49087-044-[illegible] DTS(SRB=NOM++ MPS=NOM)	.000	.000	-4.000	30.700	ZMRP
					SCALE



AXIAL FORCE COEFFICIENT, CA

FIG. 123 SUMMARY-DRAG RING EFFECT ON TANK BASE AXIAL FORCE COEF.

CA|BETA = .00

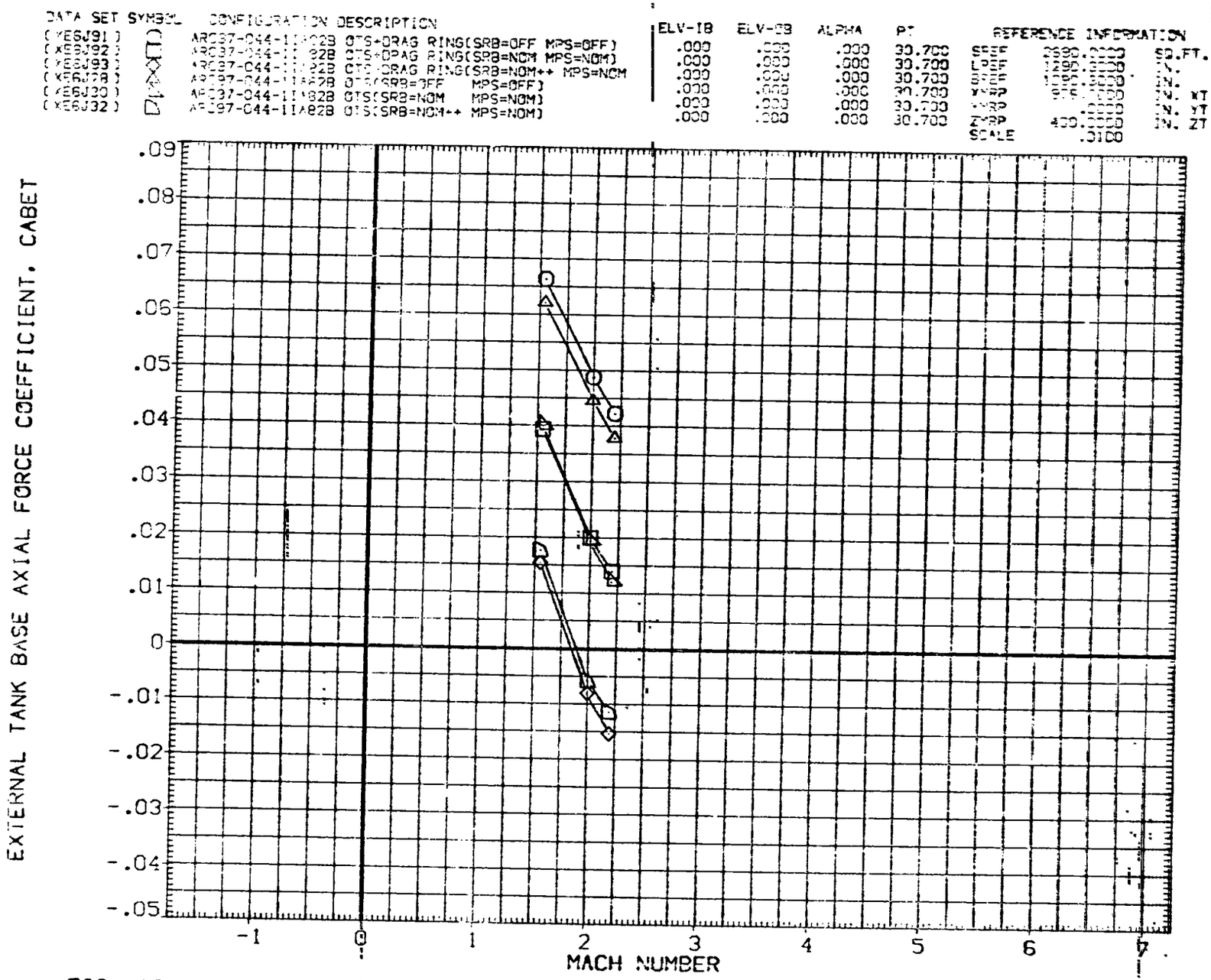


FIG. 123 SUMMARY-DRAG RING EFFECT ON TANK BASE AXIAL FORCE COEF.

(A)BETA = -4.00

	CONFIGURATION DESCRIPTION	ELV-TB	ELV-OB	ALP-W	MT	REFERENCE
	AB197-044-11A82B OTS+DRAG RING(SRB=OFF MPS=OFF)	.000	.000	.000	80.700	
	AB197-044-11A82B OTS+DRAG RING(SRB=NOM MPS=NOM)	.000	.000	.000	80.700	
	AB197-044-11A82B OTS+DRAG RING(SRB=NOM++ MPS=NOM	.000	.000	.000	80.700	
	AB197-044-11A82B OTS(SRB=OFF MPS=OFF)	.000	.000	.000	80.700	
	AB197-044-11A82B OTS(SRB=NOM MPS=NOM)	.000	.000	.000	80.700	
	AB197-044-11A82B OTS(SRB=NOM++ MPS=NOM)	.000	.000	.000	80.700	

SCALE .0100

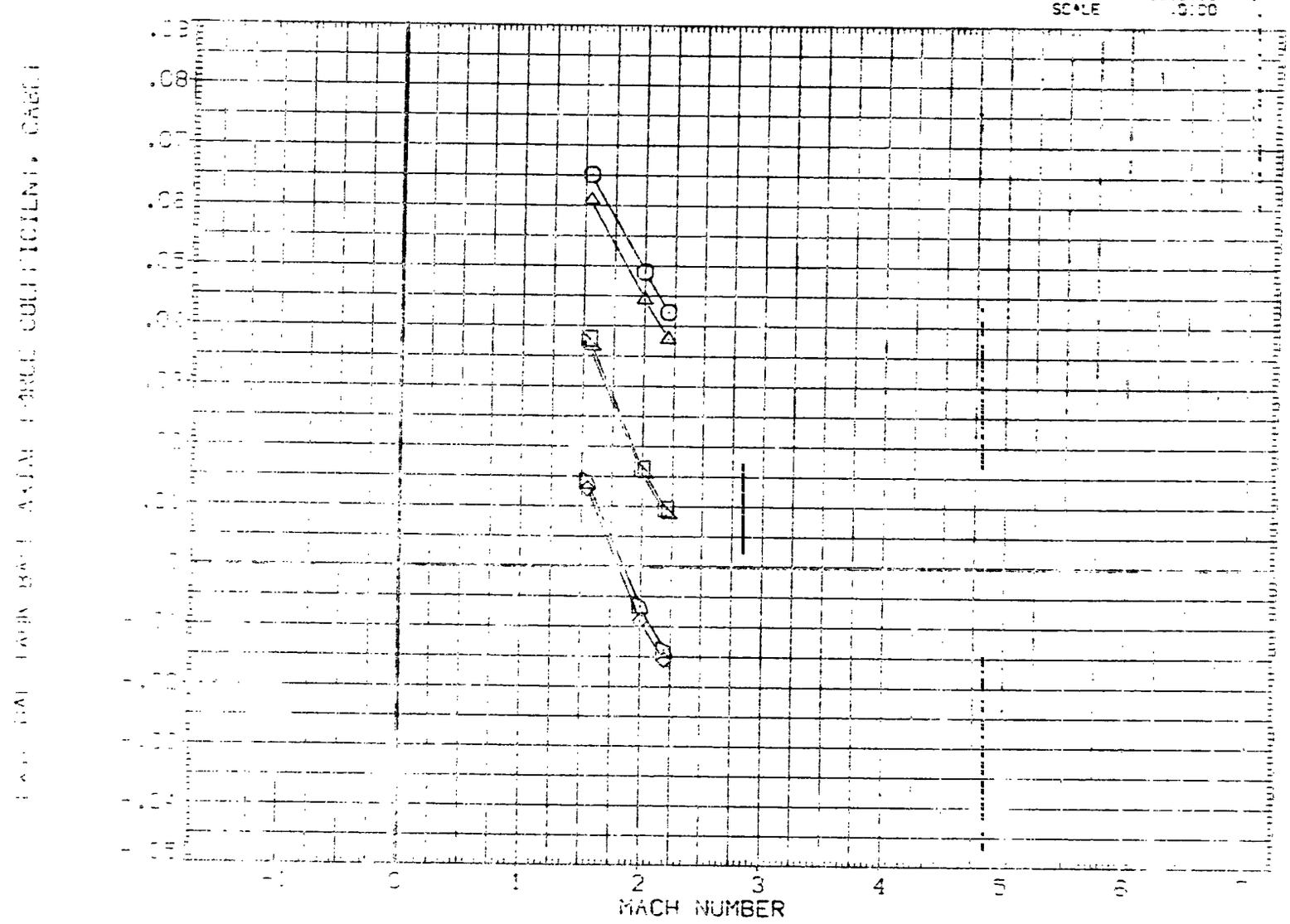


FIG. 123 SUMMARY-DRAG RING EFFECT ON TANK BASE AXIAL FORCE COEF.

(BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	PT
(XE6U31)		APC87-044-111828 OTS+DRAG RING(SRB=OFF MPS=OFF)	.000	.000	.000	30.700
(XE6U32)		APC87-044-111828 OTS+DRAG RING(SRB=NOM MPS=NOM)	.000	.000	.000	30.700
(XE6U29)		APC87-044-111828 OTS(SRB=OFF MPS=OFF)	.000	.000	.000	30.700
(XE6U30)		APC87-044-111828 OTS(SRB=NOM MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.1000	IN, XT.
YMRP	.0000	IN, YT.
ZMRP	400.0000	IN, ZT.
SCALE	.0100	

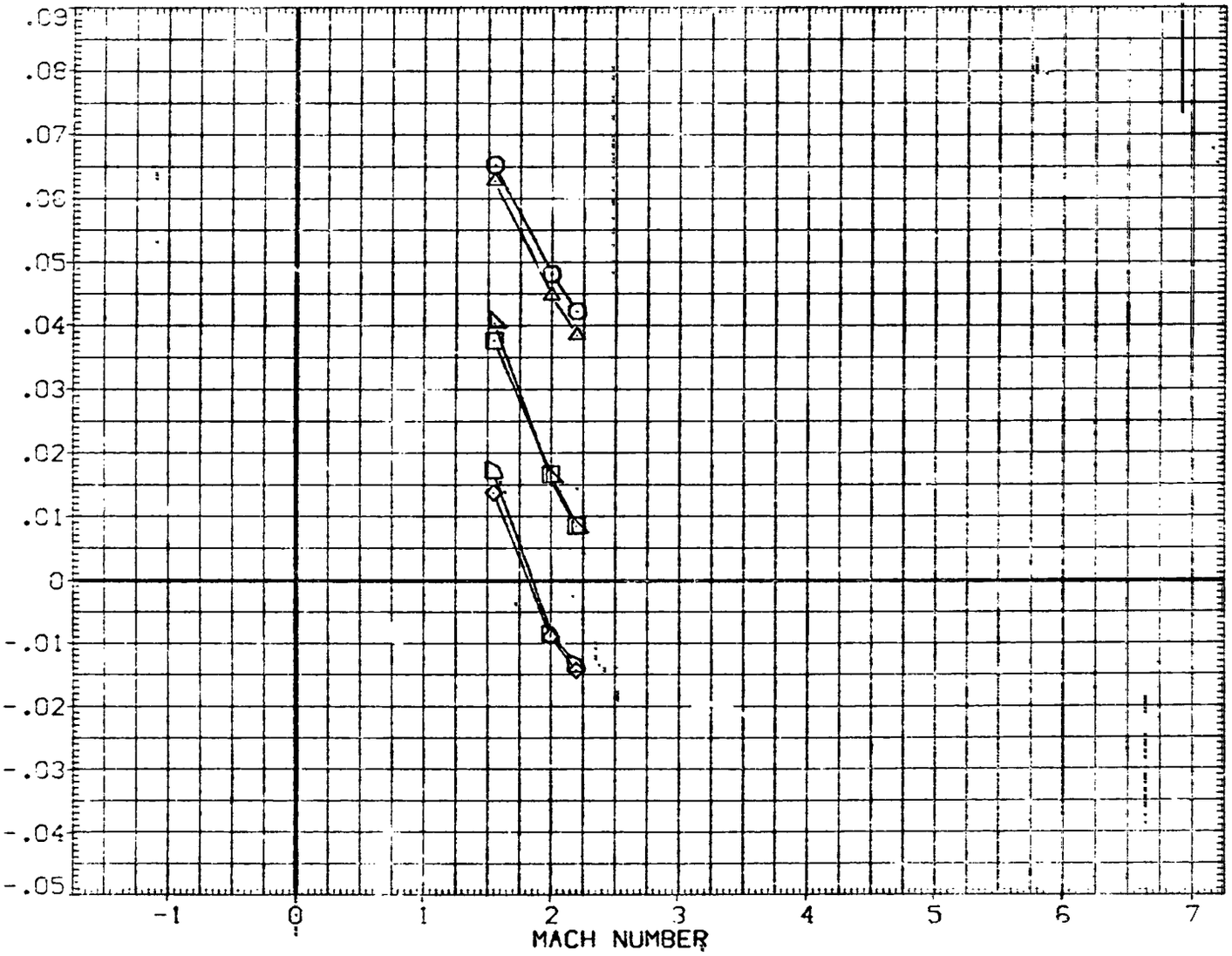


FIG. 123 SUMMARY-DRAG RING EFFECT ON TANK BASE AXIAL FORCE COEF.

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	MT	REFERENCE & MOM. CTRS.
[illegible]	[illegible]					
[illegible]	[illegible]					
[illegible]	[illegible]					
[illegible]	[illegible]					
[illegible]	[illegible]					
[illegible]	[illegible]					

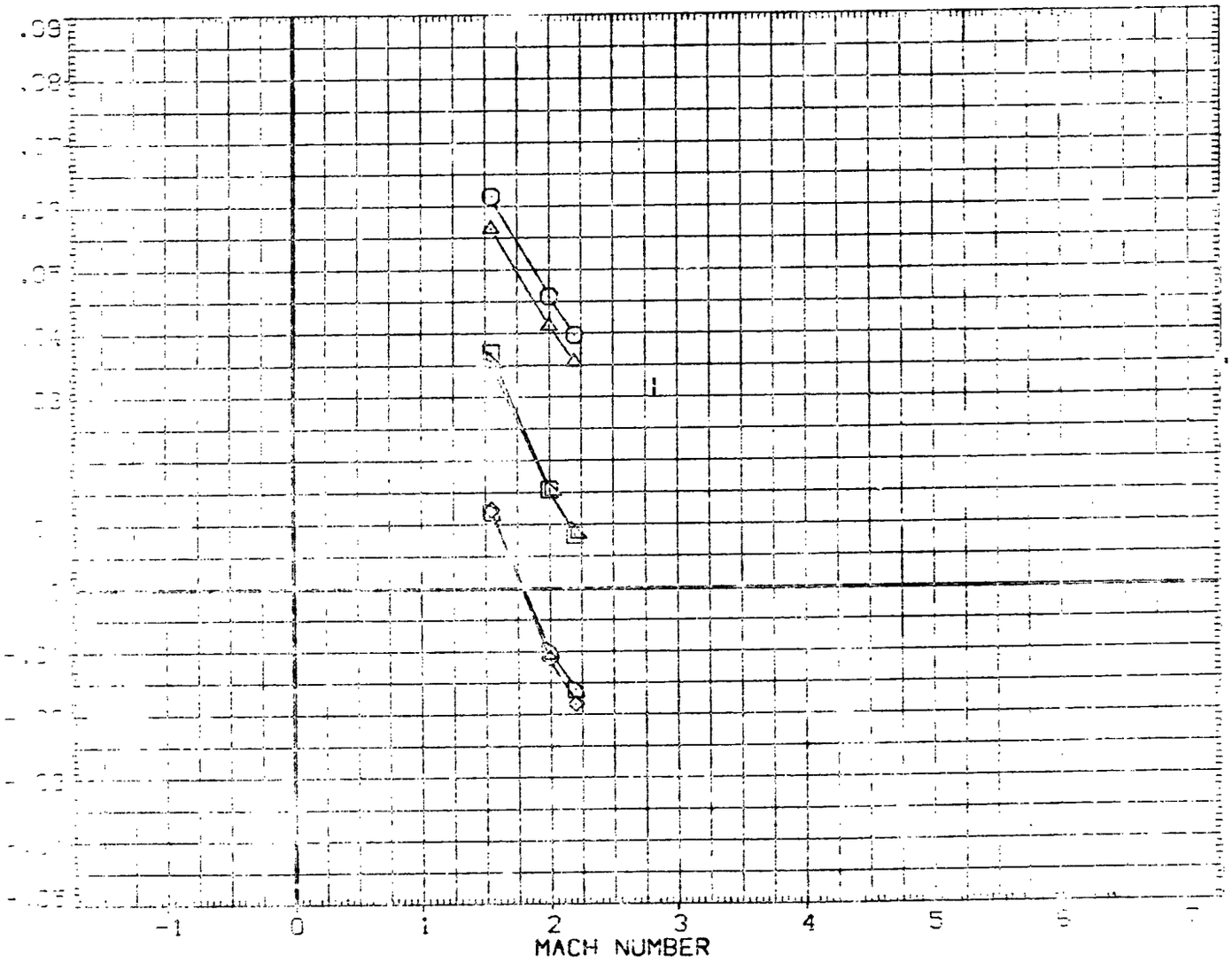


FIG. 123 SUMMARY-DRAG RING EFFECT ON TANK BASE AXIAL FORCE COEF.

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	ELV-1B	ELV-2B	PT
(JEGT01)	△	ARC97-044-11A029 OTS+RAKES(SRB=OFF	MPS=OFF)	.000	.000	.000	30.700
(JEGT03)	□	ARC97-044-11A02G OTS+RAKES(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700
(JEGT07)		ARC97-044-11A02G OTS+RAKES(SRB=NOM	MPS=NOM-)	.000	.000	.000	30.700
(JEGT08)		ARC97-044-11A02G OTS+RAKES(SRB=NOM	MPS=NOM+)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

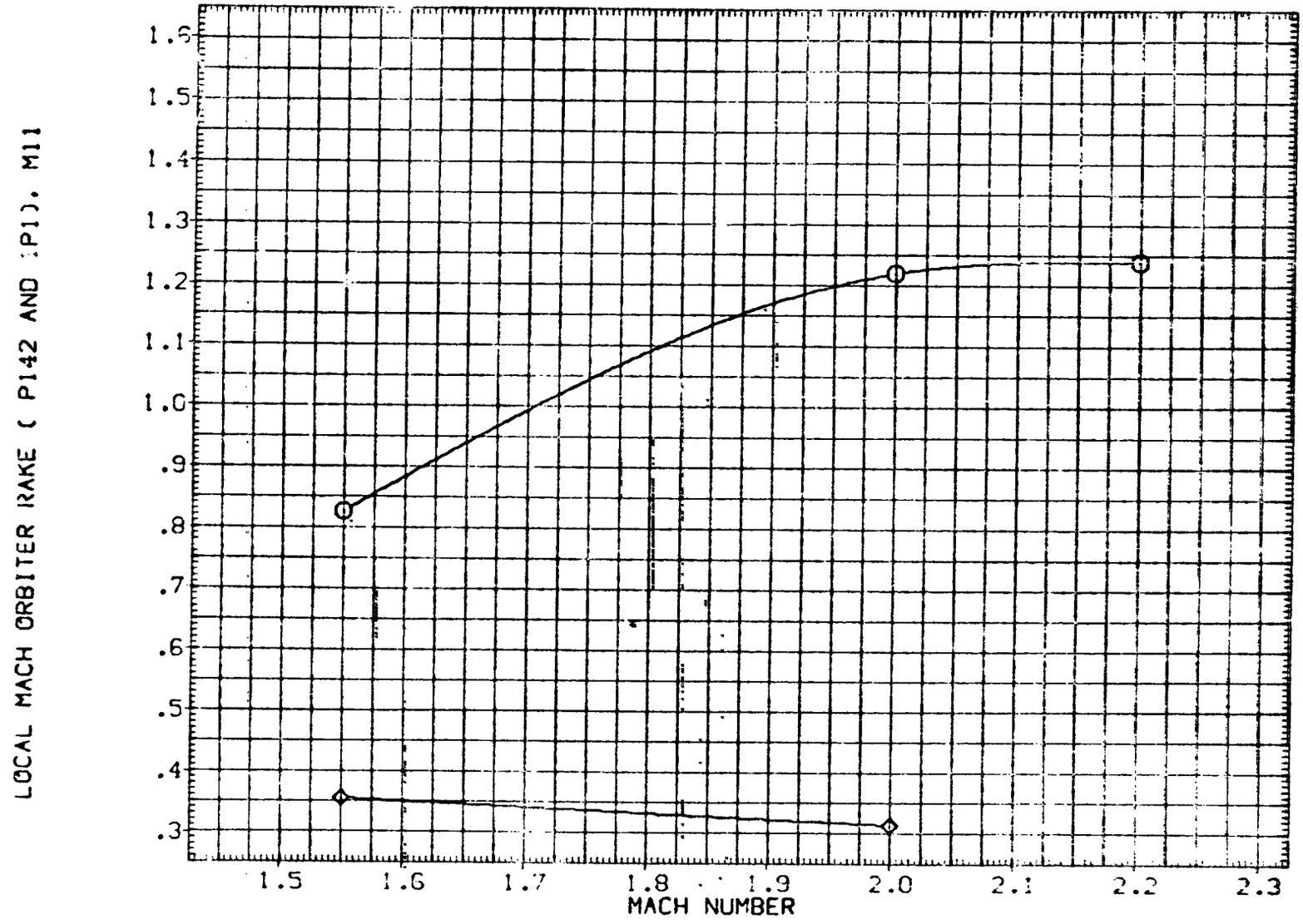


FIG. 124 EFFECT OF MPS PLUME SIZE ON ORBITER BASE APPROACH MACH NUMBERS

(A)BETA = .00

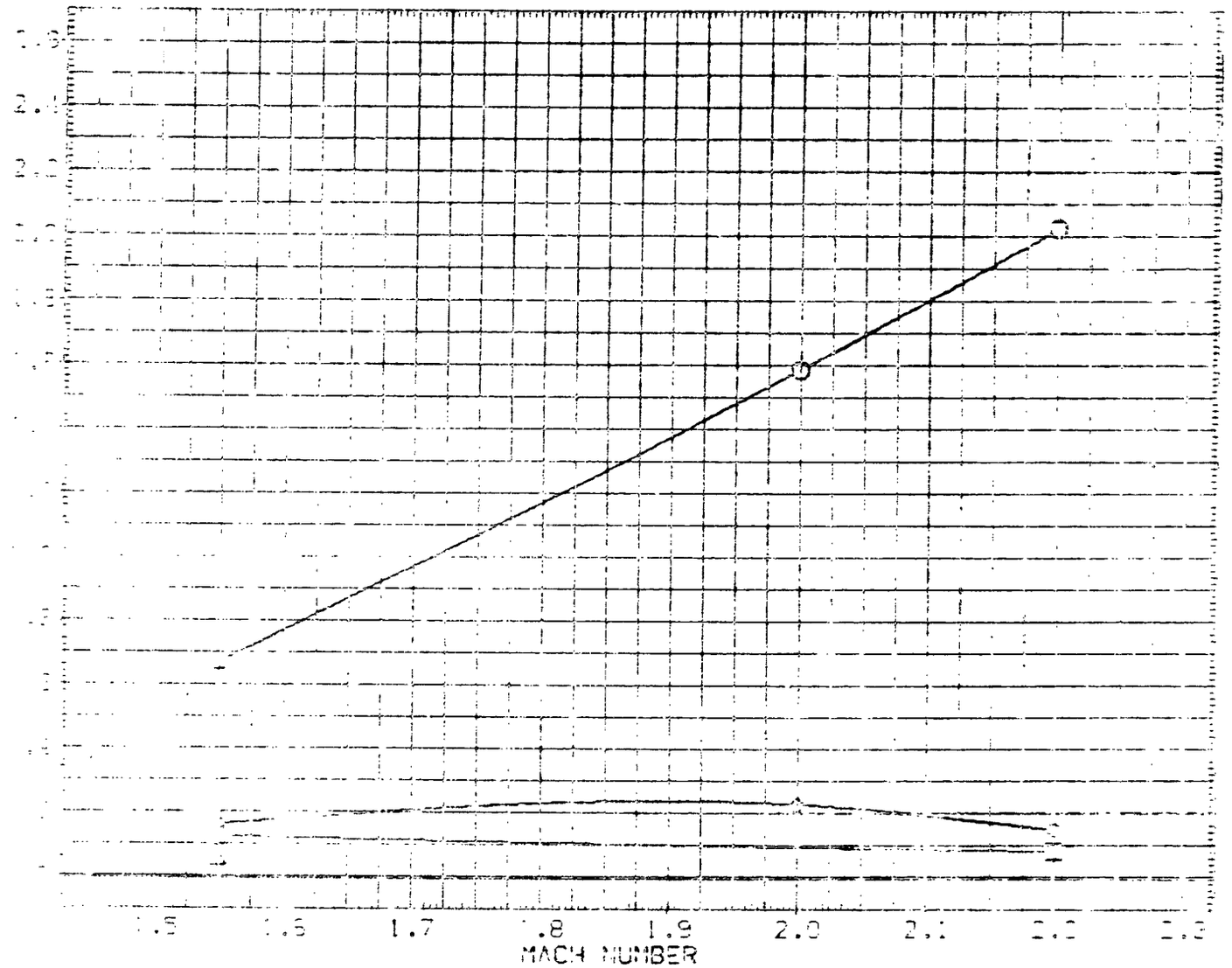


FIG. 124 EFFECT OF MPS PLUME SIZE ON ORBITER BASE APPROACH MACH NUMBERS

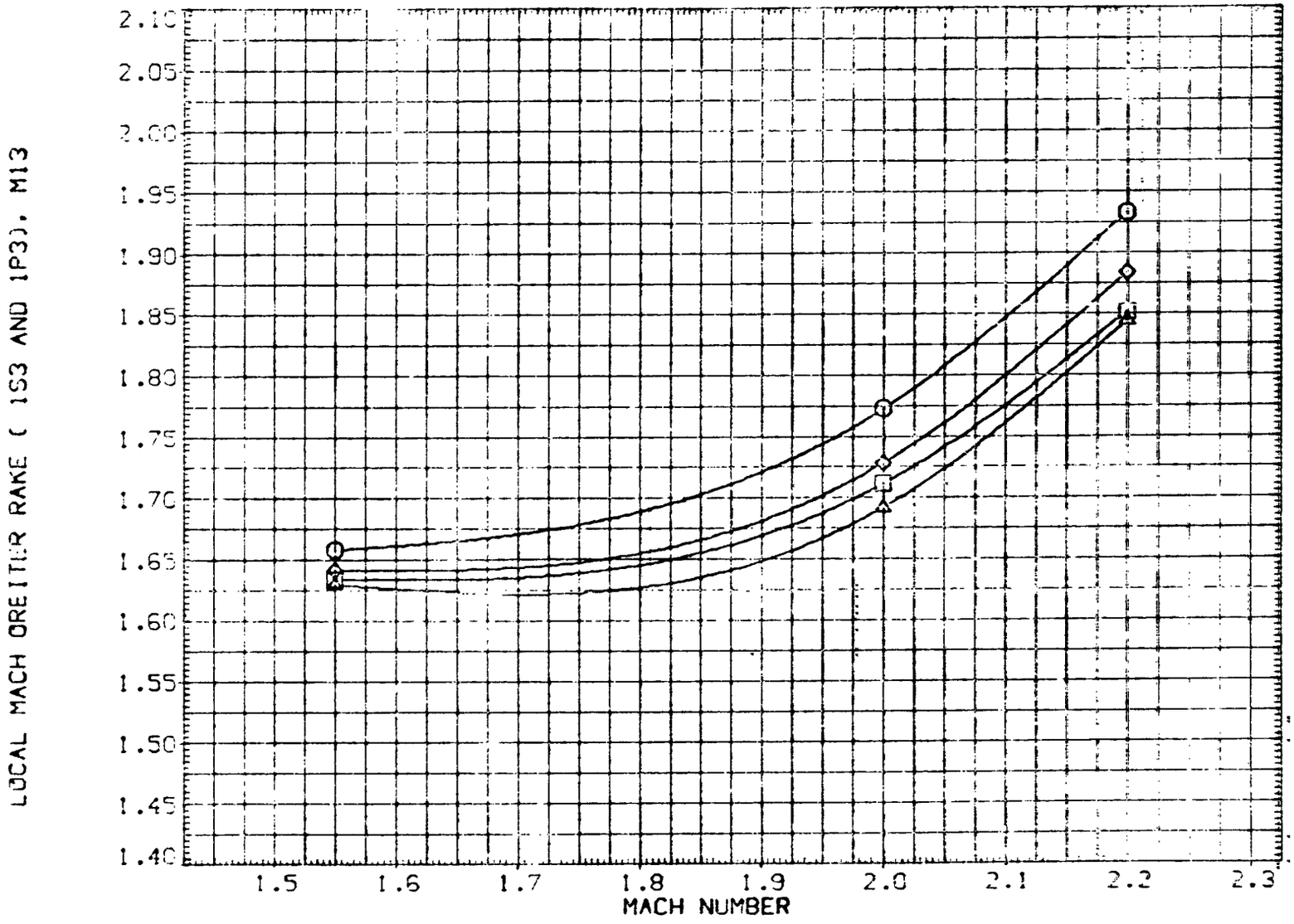


FIG. 124 EFFECT OF MPS PLUME SIZE ON ORBITER BASE APPROACH MACH NUMBERS

CA)BETA = .00

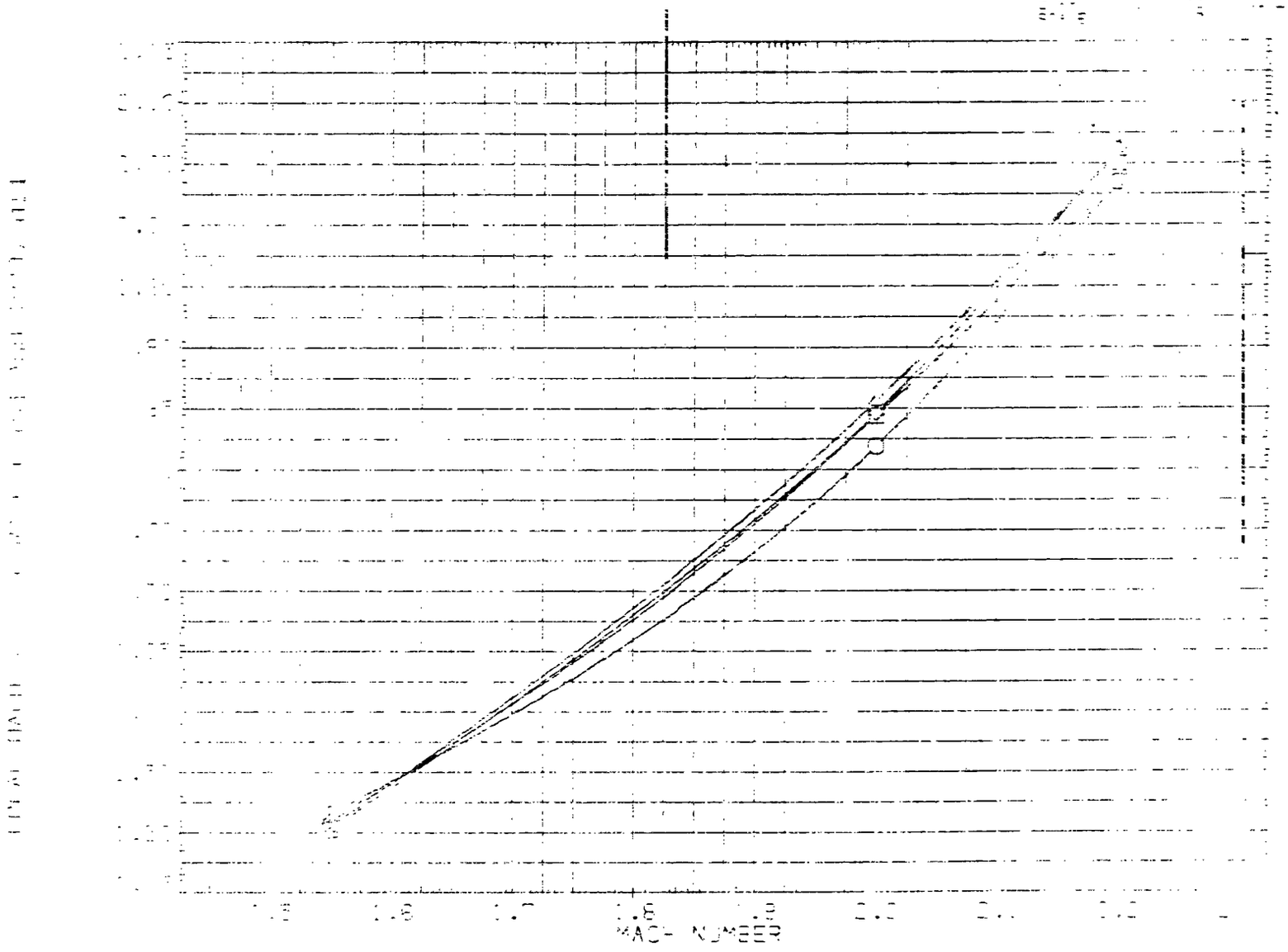


FIG. 4.1.1 EFFECT OF MPS PLUME SIZE ON ORBITER BASE APPROACH

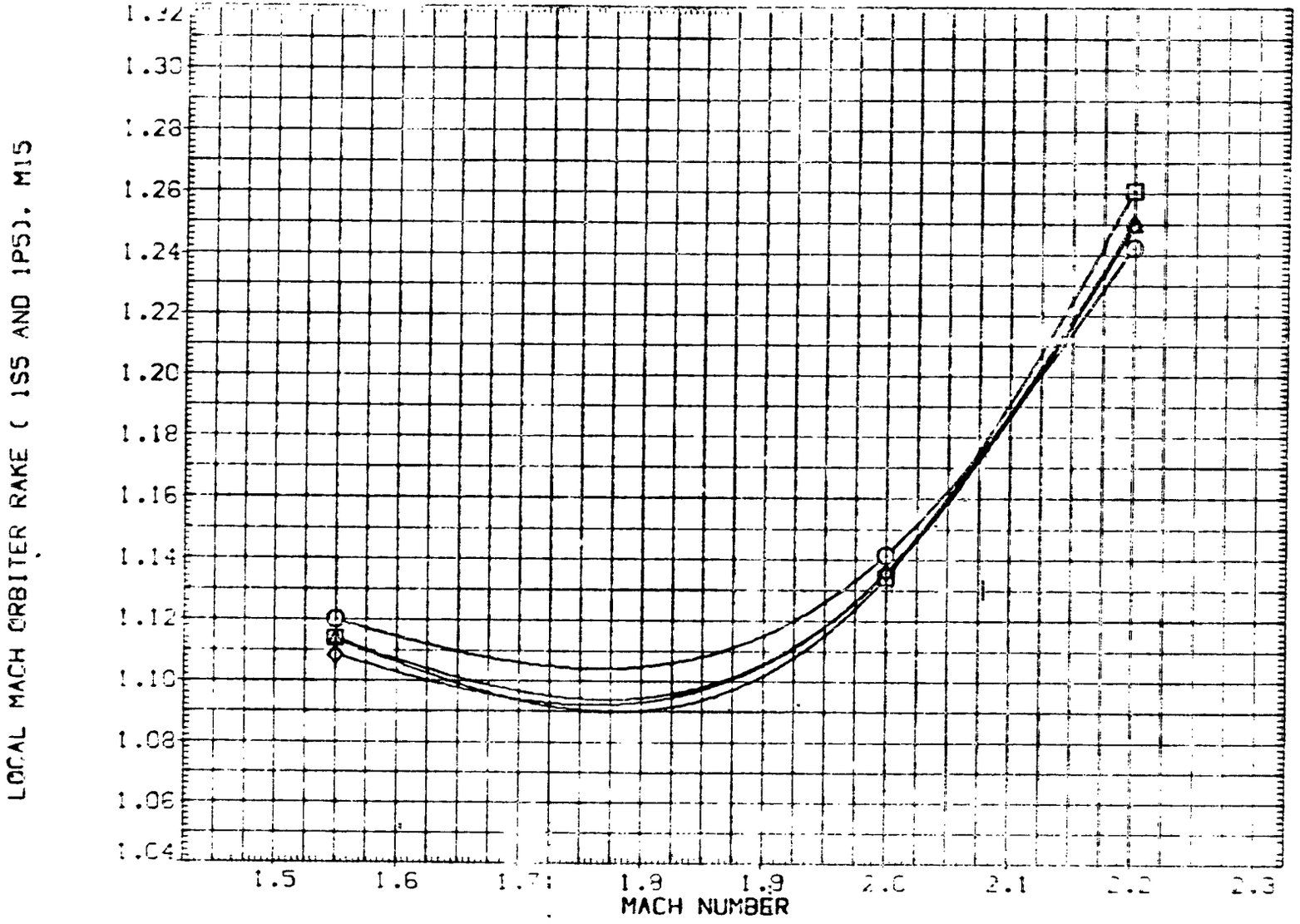


FIG. 124 EFFECT OF MPS PLUME SIZE ON ORBITER BASE APPROACH MACH NUMBERS

(A)BETA = .00

MACH NUMBER

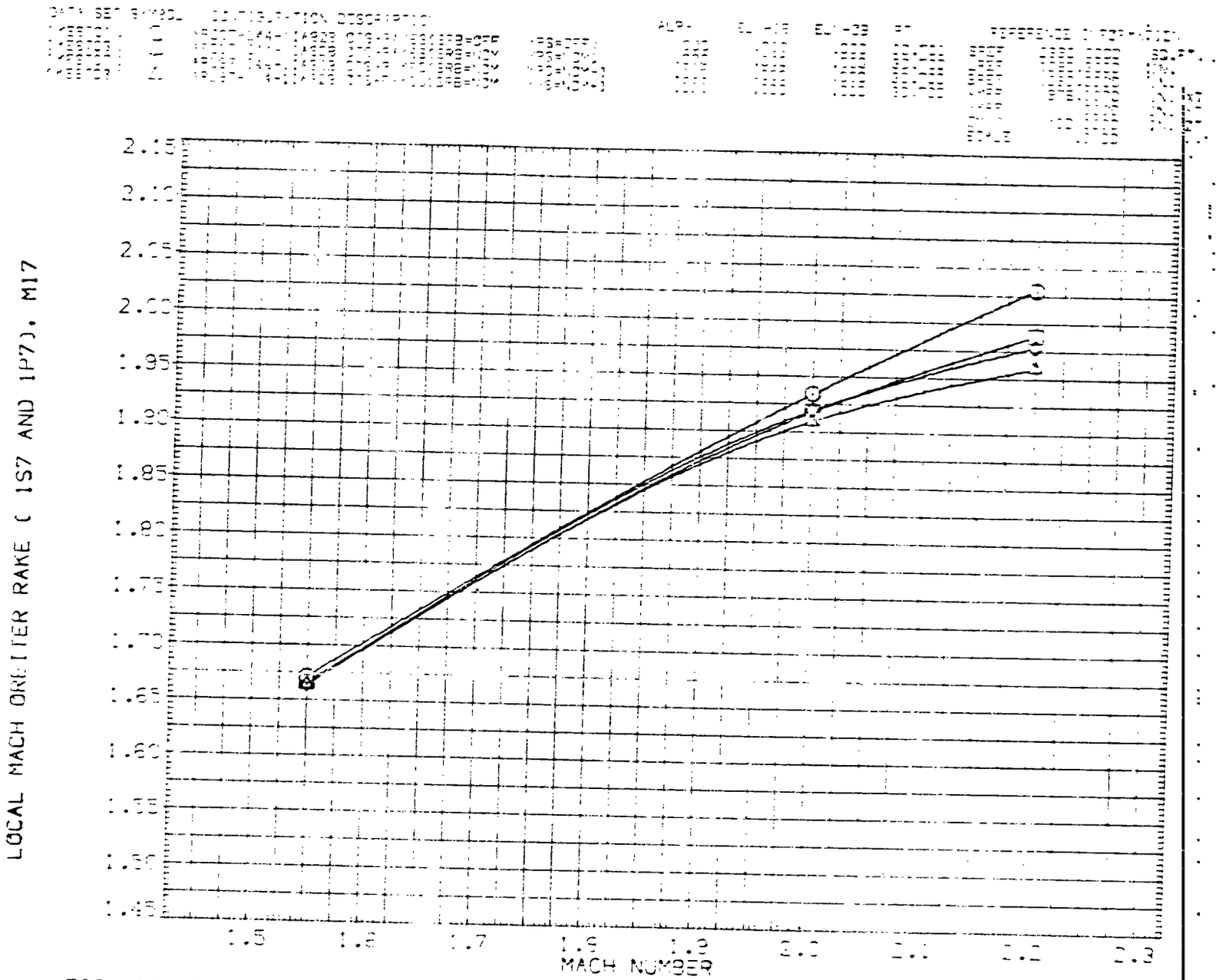


FIG. 124 EFFECT OF MPS PLUME SIZE ON ORBITER BASE APPROACH MACH NUMBERS

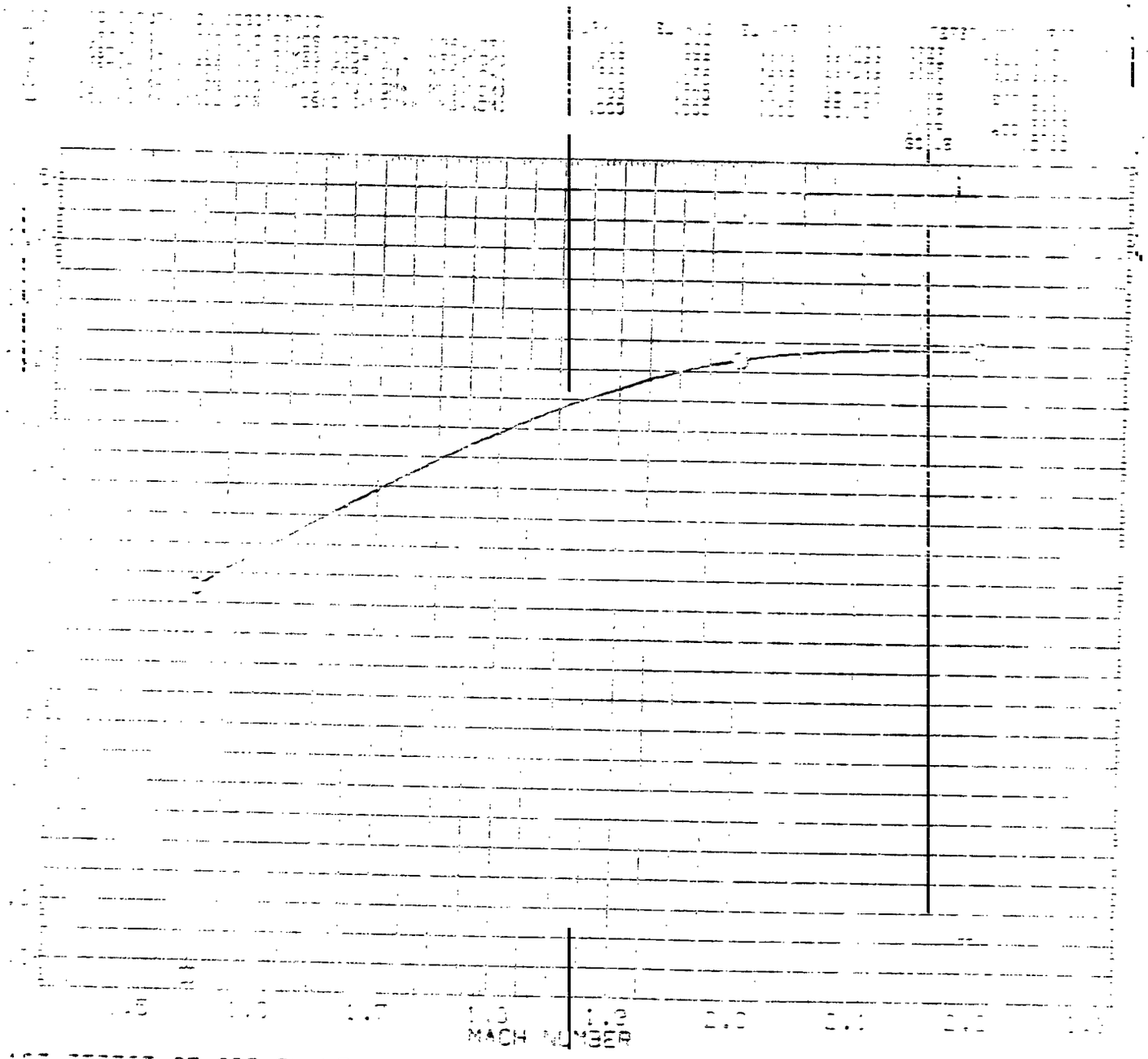


FIG. 128 EFFECT OF SOB PLUME SIZE ON JET BASE PRESSURE MACH NO. SEPS
CA(BETA = .00

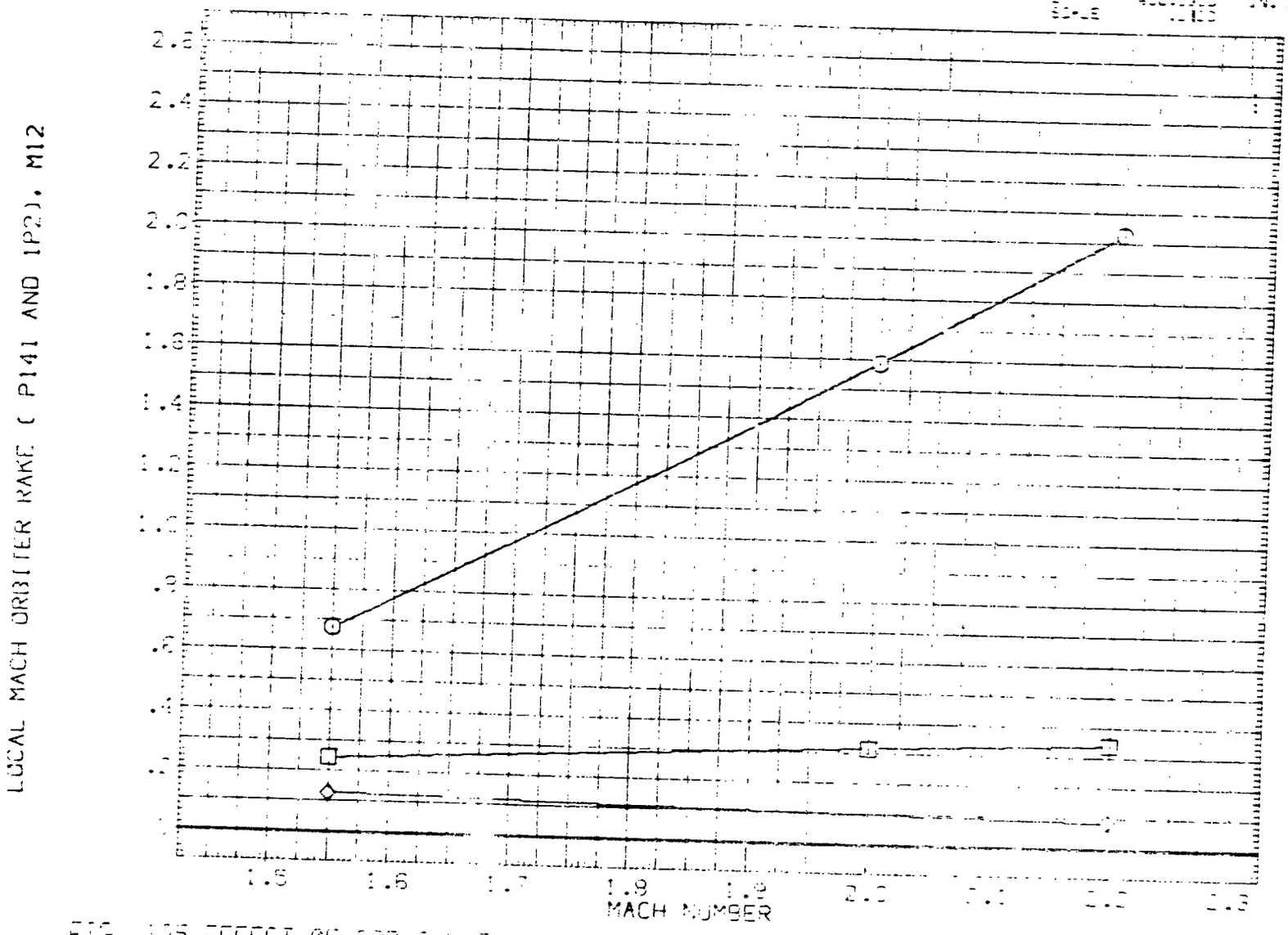


FIG. 125 EFFECT OF SRB PLUME SIZE ON ET BASE APPROACH MACH NUMBERS

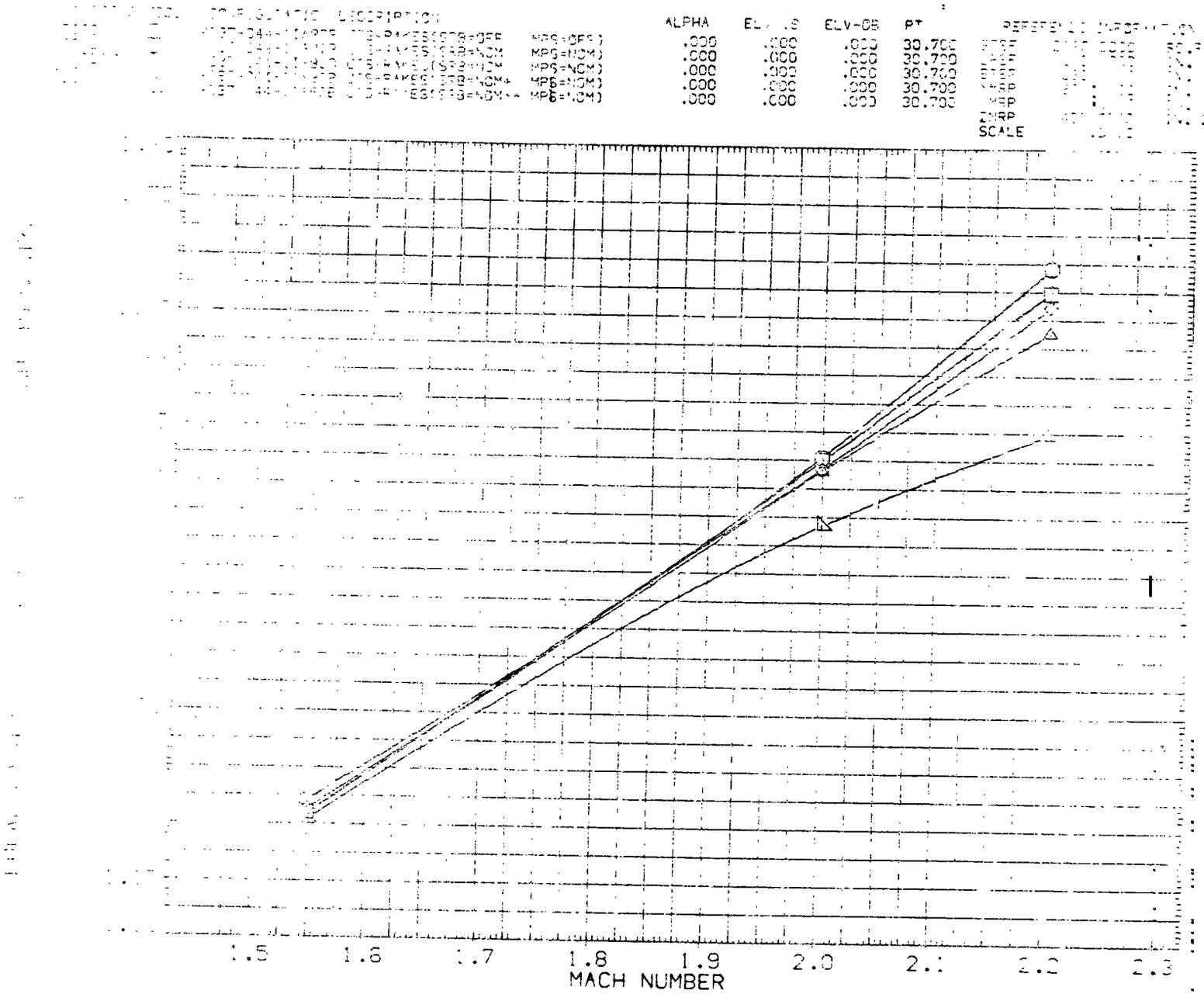


FIG. 125 EFFECT OF SRB PLUME SIZE ON ET BASE APPROACH MACH NUMBERS

CA(BETA = .00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ALPHA	ELV-IB	ELV-OB	PT
(AB6101)		AR097-044-11 928 ...	MPS=OFF)	.000	.000	.000	30.700
(AB6102)		AR097-044-11 928 ...	MPS=NOM)	.000	.000	.000	30.700
(AB6703)		AR097-044-11 928 ...	MPS=NOM)	.000	.000	.000	30.700
(AB6704)		AR097-044-11 928 ...	MPS=NOM)	.000	.000	.000	30.700
(AB6105)		AR097-044-11 928 ...	MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

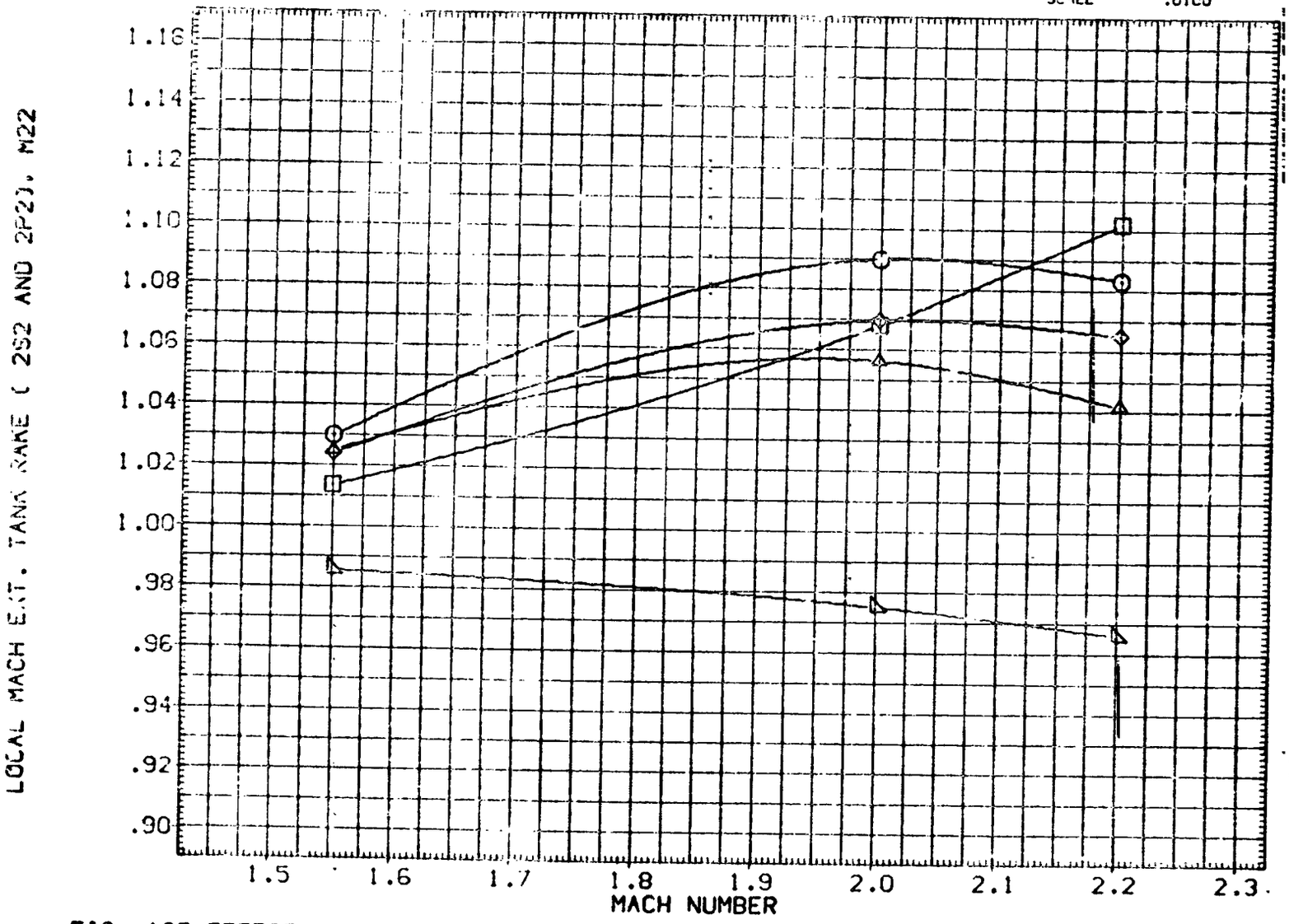


FIG. 125 EFFECT OF SRB PLUME SIZE ON ET BASE APPROACH MACH NUMBERS

(A)BETA = .00

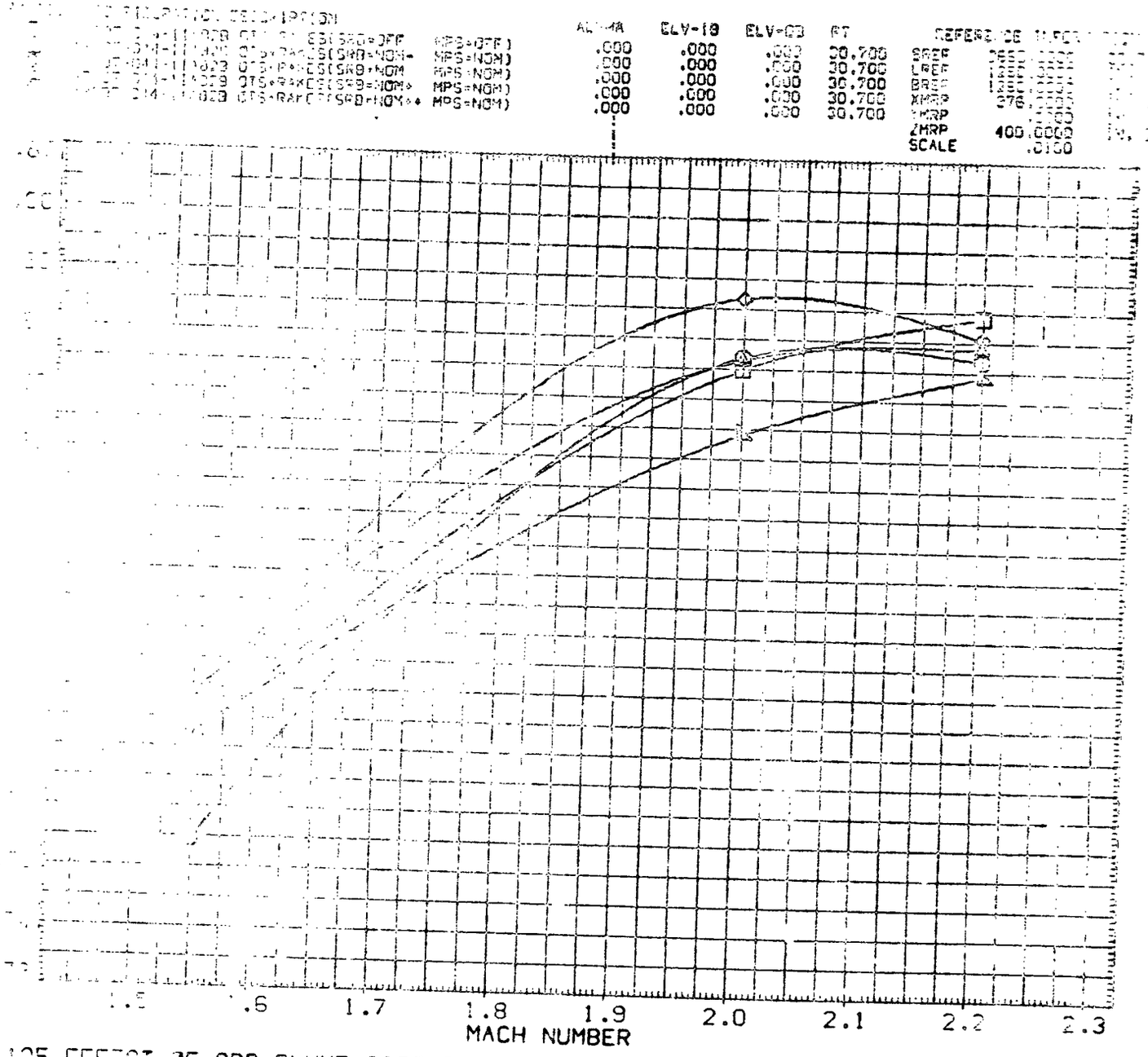


FIG. 125 EFFECT OF SRB PLUME SIZE ON ET BASE APPROACH MACH NUMBERS

(A)BETA = .00

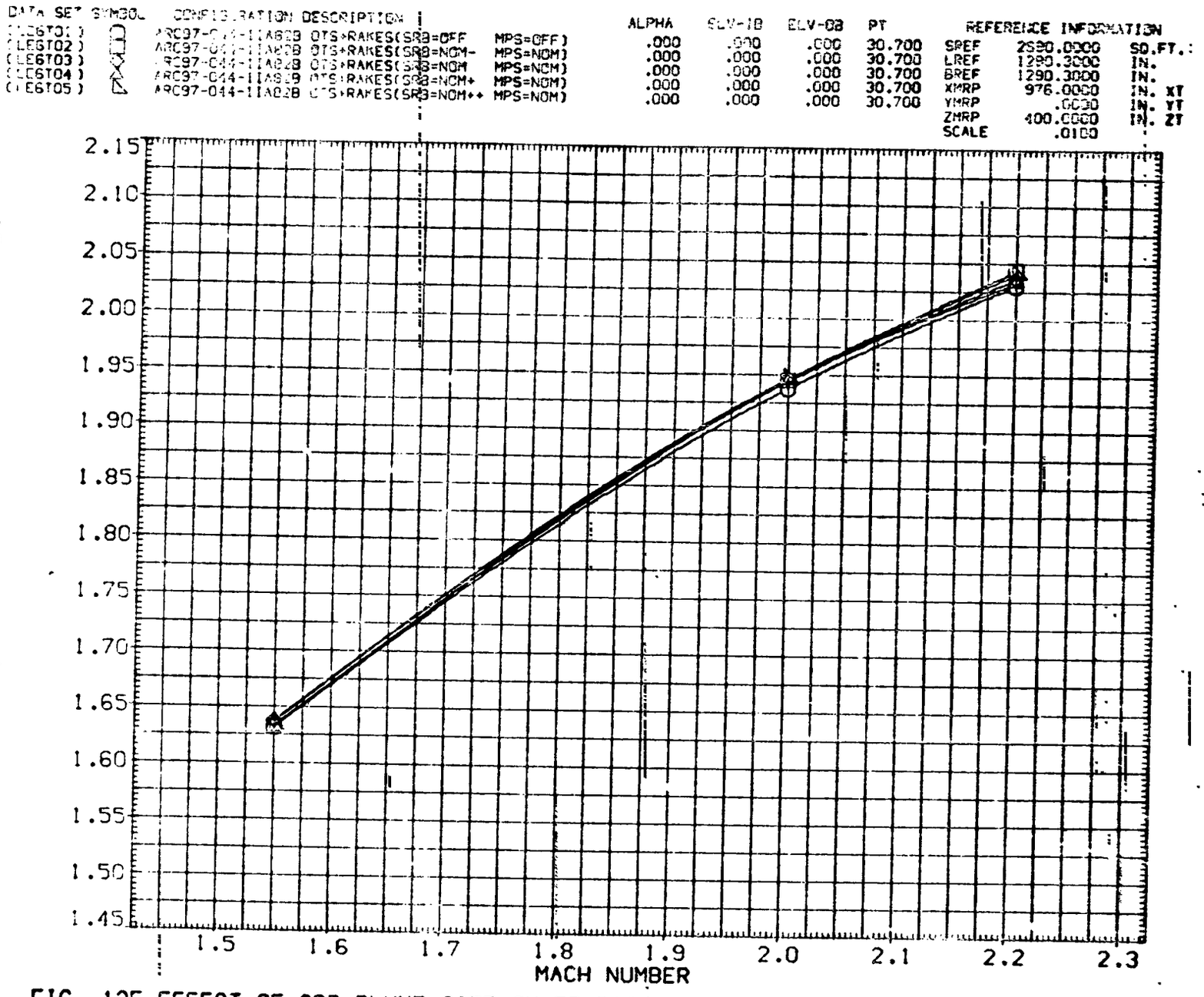


FIG. 125 EFFECT OF SRB PLUME SIZE ON ET BASE APPROACH MACH NUMBERS

CAOBETA = .00

CONFIGURATION DESCRIPTION		ALPHA	ELV-IB	ELV-OB	PT
[illegible]-044-1 A82B OTS+RAKES(SRB=OFF	MPS=OFF)	.000	.000	.000	30.700
[illegible]-044-1 A82B OTS+RAKES(SRB=NOM-	MPS=NOM)	.000	.000	.000	30.700
[illegible]-044-1 A82B OTS+RAKES(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700
[illegible]-044-1 A82B OTS+RAKES(SRB=NOM+	MPS=NOM)	.000	.000	.000	30.700
[illegible]-044-1 A82B OTS+RAKES(SRB=NOM++	MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	[illegible]	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN. XT.
YMRP	[illegible]	IN. YT
ZMRP	[illegible]	IN. ZT
SCALE	.0100	

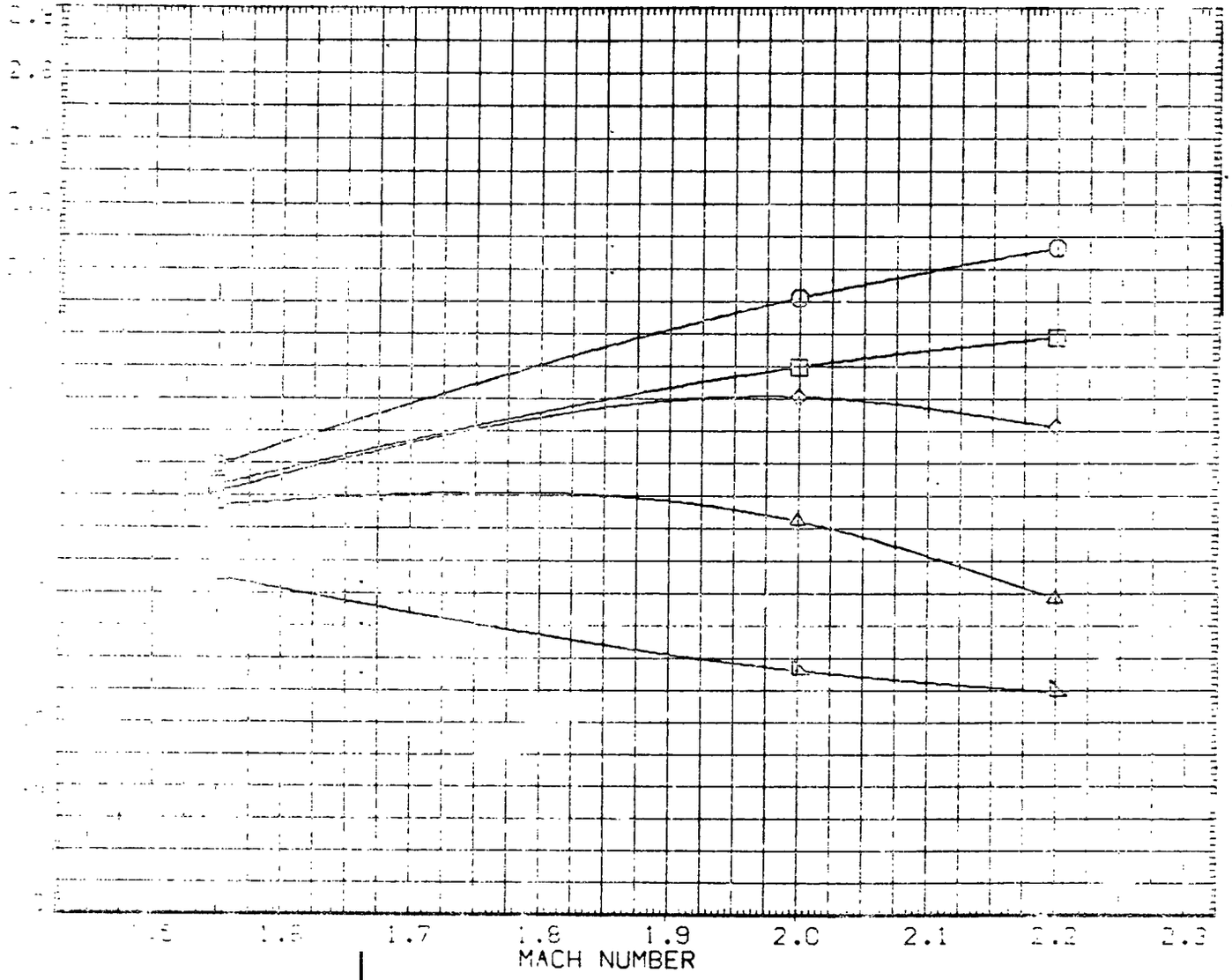


FIG. 126 EFFECT OF SRB PLUME SIZE ON SRB BASE APPROACH MACH NUMBERS

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	ELV-IB	ELV-OB	PT
(LE6T01)	ARC97-014-11A82P OTS+RAKES(SRB=OFF	MPS=OFF)	.000	.000	.000	30.700
(LE6T02)	ARC97-014-11A82B OTS+RAKES(SRB=NOM-	MPS=NOM)	.000	.000	.000	30.700
(LE6T03)	ARC97-014-11A82B OTS+RAKES(SRB=NOM	MPS=NOM)	.000	.000	.000	30.700
(LE6T04)	ARC97-044-11A82B OTS+RAKES(SRB=NOM+	MPS=NOM)	.000	.000	.000	30.700
(LE6T05)	ARC97-014-11AR2B OTS+RAKES(SRB=NOM++	MPS=NOM)	.000	.000	.000	30.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

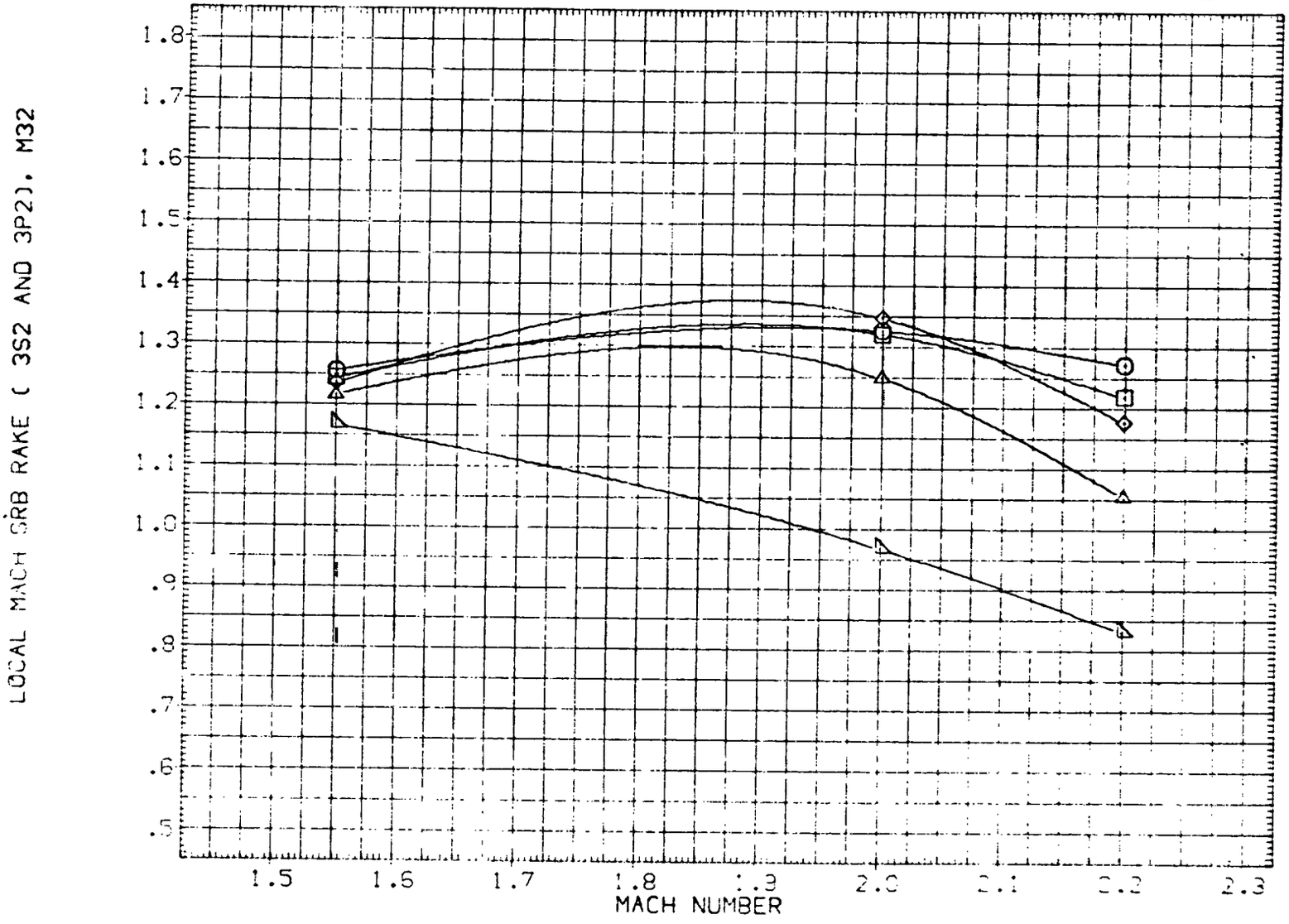


FIG. 126 EFFECT OF SRB PLUME SIZE ON SRB BASE APPROACH MACH NUMBERS

(A)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELV-IB	ELV-OB	PT
[illegible]	[illegible]	AP097-044-11A823 OTS+RAKES(SRB=OFF MPS=OFF)	.000	.000	.000	30.700
[illegible]	[illegible]	AP097-044-11A823 OTS+RAKES(SRB=NOM- MPS=NOM)	.000	.000	.000	30.700
[illegible]	[illegible]	AP097-044-11A823 OTS+RAKES(SRB=NOM MPS=NOM)	.000	.000	.000	30.700
[illegible]	[illegible]	AP097-044-11A823 OTS+RAKES(SRB=NOM+ MPS=NOM)	.000	.000	.000	30.700
[illegible]	[illegible]	AP097-044-11A823 OTS+RAKES(SRB=NOM++ MPS=NOM)	.000	.000	.000	30.700

REFERENCE A [illegible]

SREF	[illegible]	SQ.FT.
LREF	[illegible]	IN.
BREF	[illegible]	IN.
XMRP	[illegible]	IN.
YMRP	[illegible]	IN.
ZMRP	[illegible]	IN.
SCALE	[illegible]	

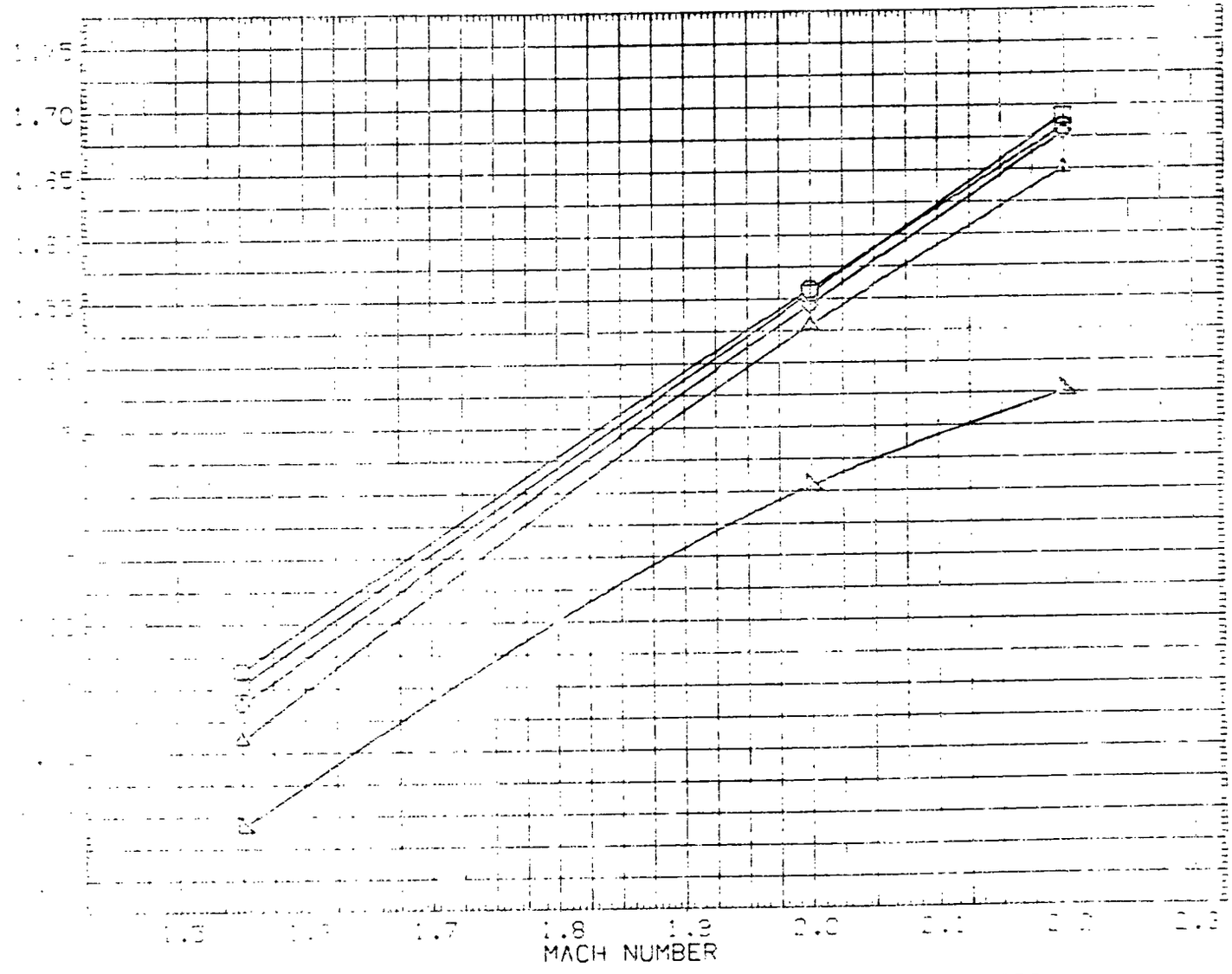


FIG. 10B EFFECT OF SRB PLUME SIZE ON SRB BASE APPROACH MACH NUMBERS

BETA .00

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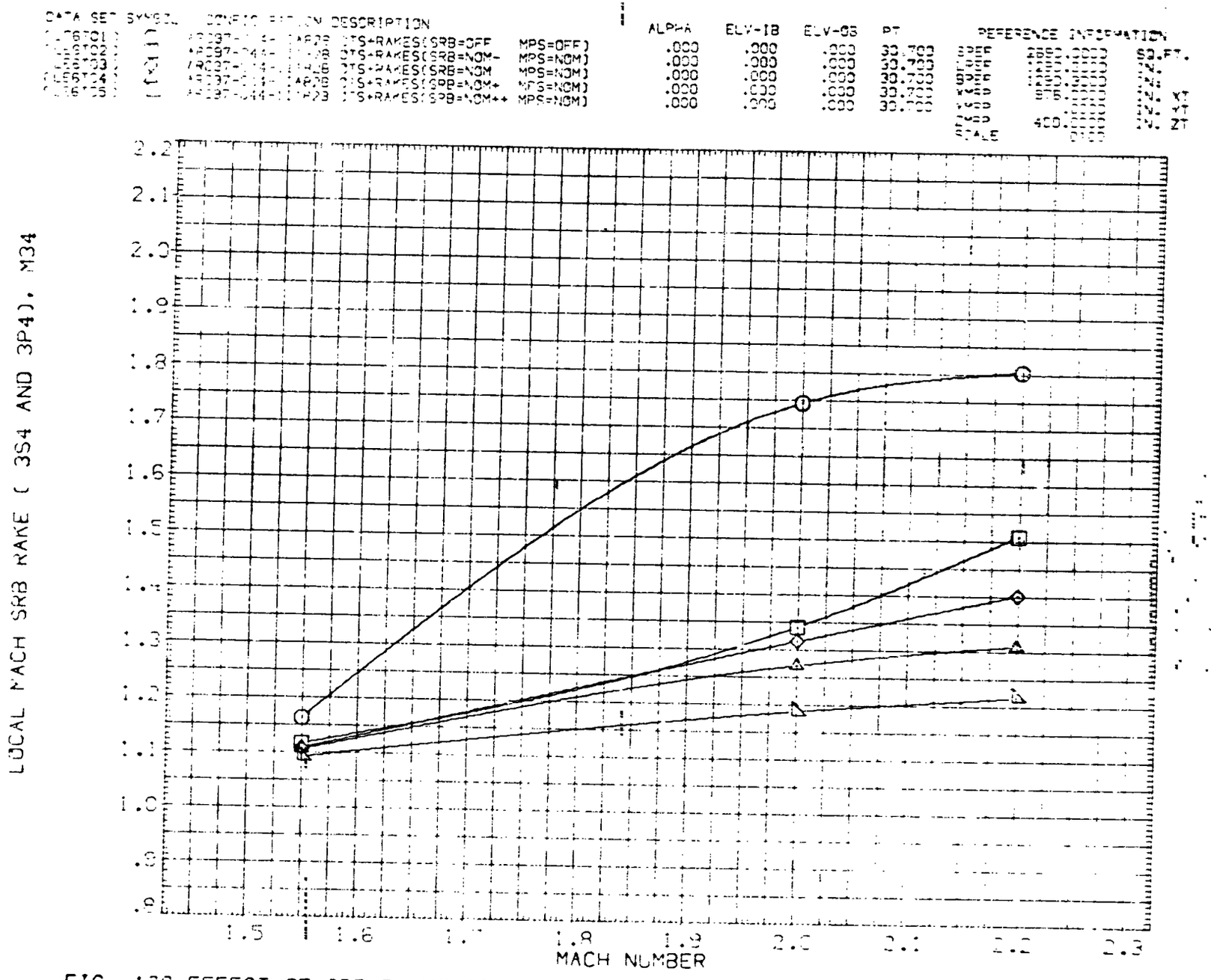


FIG. 126 EFFECT OF SRB PLUME SIZE ON SRB BASE APPROACH MACH NUMBERS

(ALPHA = .00

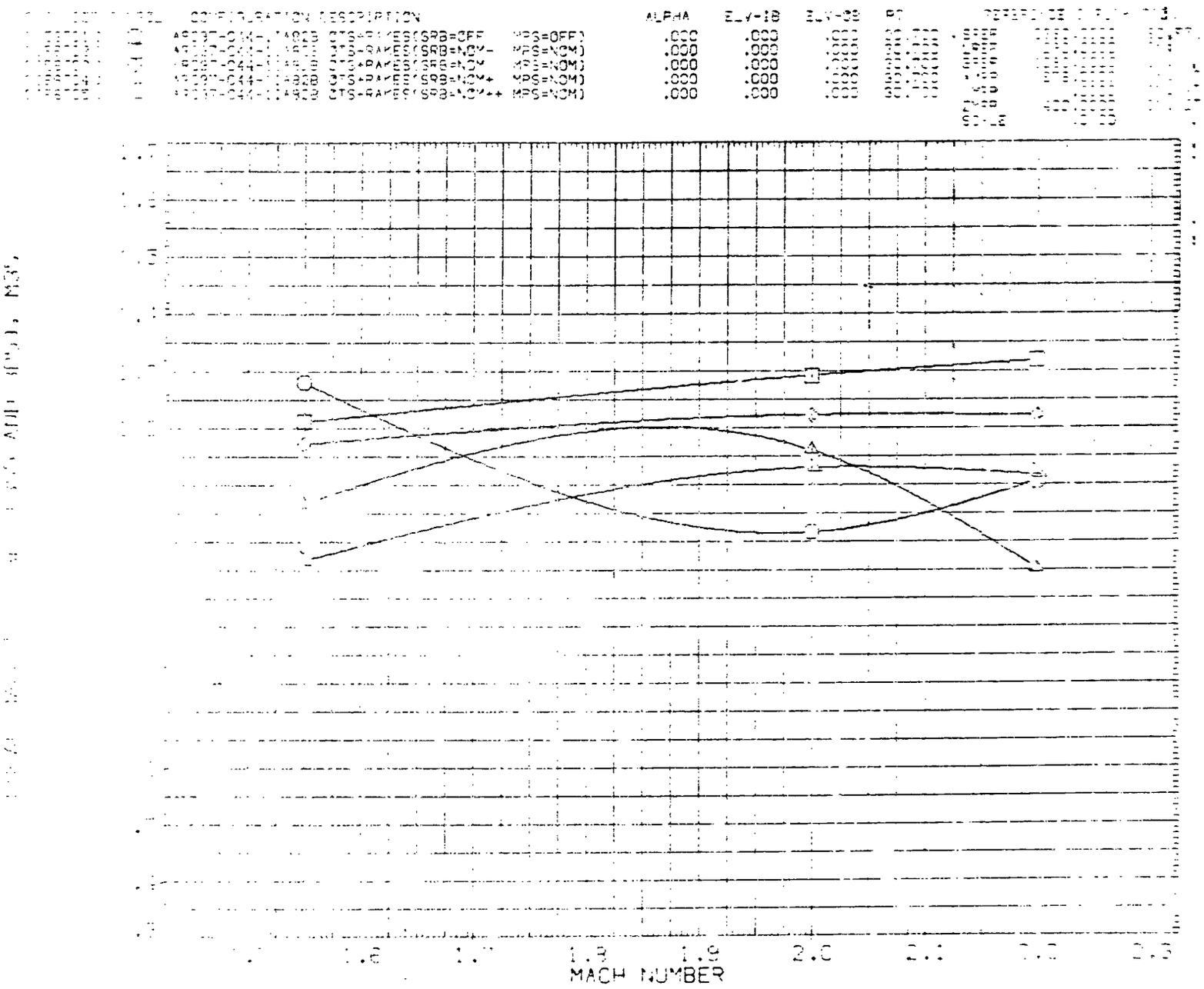


FIG. 103 EFFECT OF SRB PLUME SIZE ON SRB BASE APPROACH MACH NUMBERS

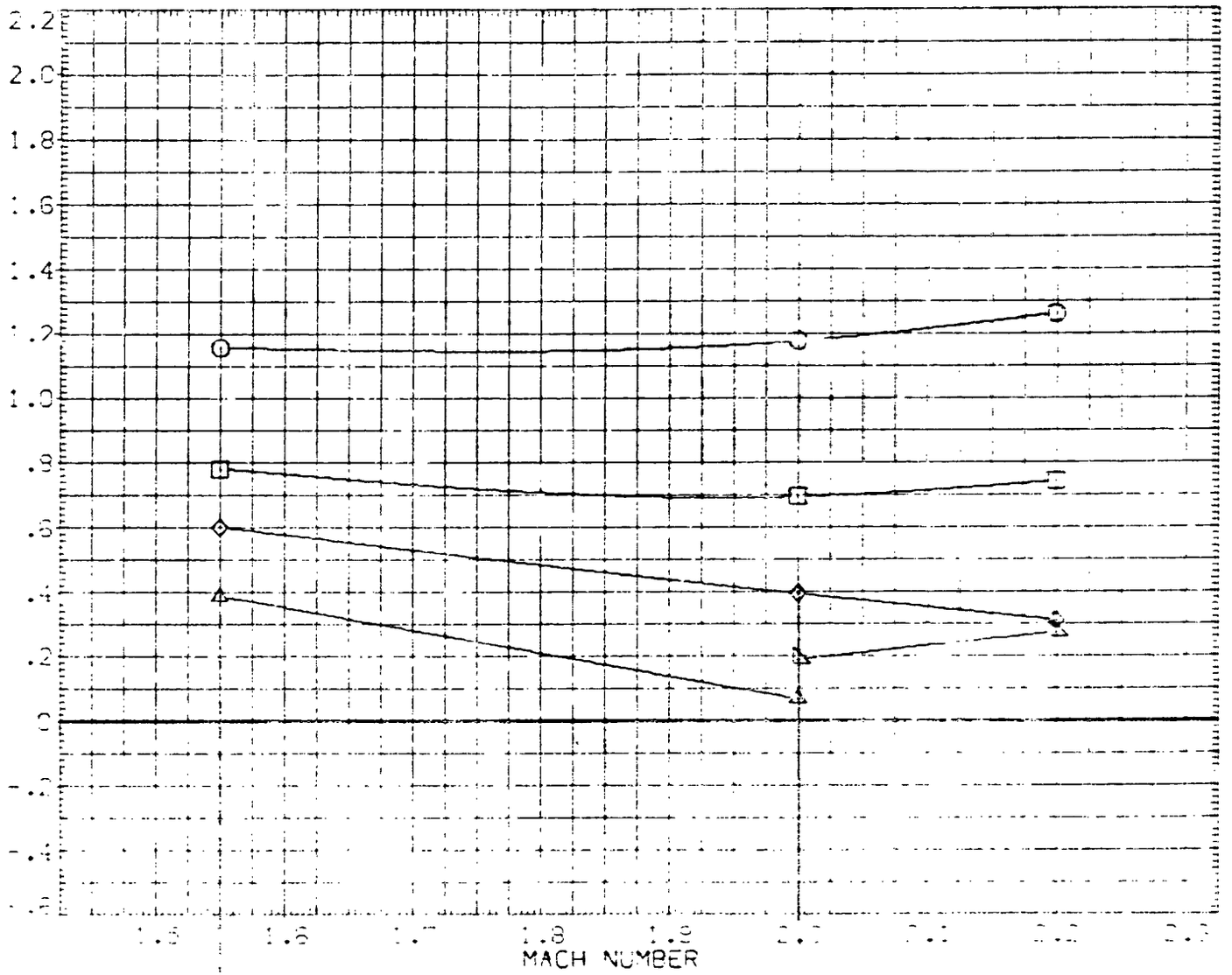


FIG. 126 EFFECT OF SRB PLUME SIZE ON SRB BASE APPROACH MACH NUMBERS